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extension review

United States Department of Agriculture Winter/Spring 1986

Leadership Development

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Developing Leaders For America

The continued strength of American agriculture and our Nation depends on a strong, replenishable reservoir of dynamic leaders. Developing the human capital -- the men and women needed to lead communities, organizations, and government at all levels is vital to the future direction of the food and agricultural sciences.

This issue of *Extension Review* magazine documents the significance and place of leadership development in Extension education. Programs such as the Oklahoma Agricultural Leadership Program are teaching and honing these future leaders— preparing them to operate in a global community by expanding their understanding of our Nation's economic, political, cultural, and social system. In Minnesota, a similar program, called "Emerging Leadership" improves leadership skills and encourages participation in the public decisionmaking process.

Leadership development and public policy participation are also important components of Extension volunteer and 4-H youth development education. Leadership development plays a key role in the work and training of the nearly 3 million volunteers involved in delivering Extension programs to every community in America.

Last fall, Eleanor Whittemore, president of the National Extension Homemakers Council and other volunteer leaders from that organization came to Washington, D.C. to introduce the Certified Volunteer Unit (CVU) program to key USDA program leaders and representatives of other national organizations based here in our Nation's capital. Leaders from the Girl Scouts of America, the American Farm Bureau, the National Farmers Union, the American Association of Retired Persons, the National 4-H Council and other volunteer organizations met and learned how the CVU lesson plans could be used to teach and reward volunteers.

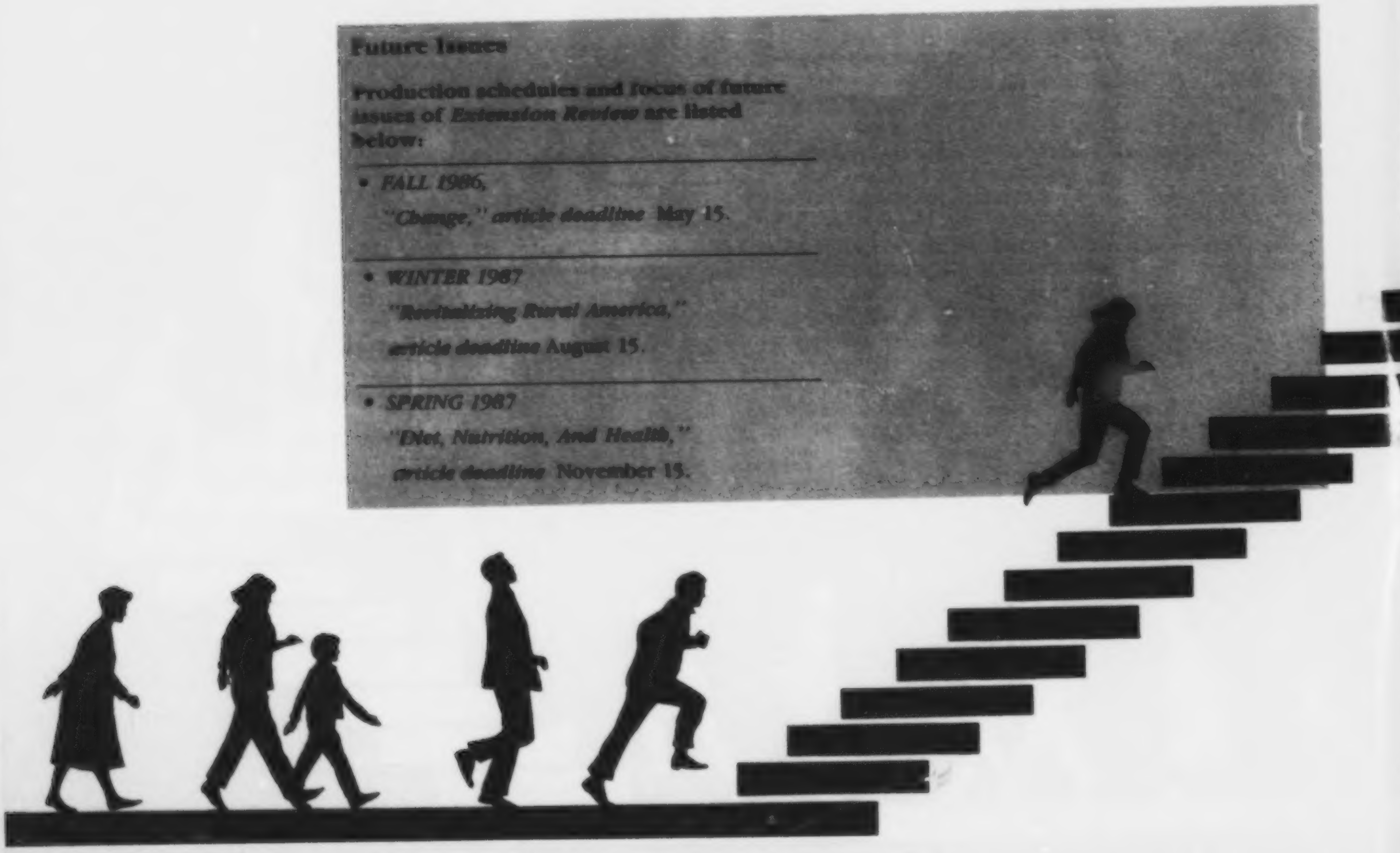
Last month, the Salute to Excellence Program brought 52 outstanding 4-H volunteer leaders to Washington, D.C. for a recognition and training seminar. Participants returned to their states, Puerto Rico and the District of Columbia, equipped with a plan they developed to strengthen 4-H volunteerism back home.

Programs such as these and others highlighted in this issue point to the continued importance and vitality of leadership development to Extension education. Our present success and future growth depends on it. ☐

Future Issues

Production schedules and focus of future issues of *Extension Review* are listed below:

- ***FALL 1986,***
  "Change," article deadline **May 15.**
- ***WINTER 1987***
  "Revitalizing Rural America,"
  article deadline **August 15.**
- ***SPRING 1987***
  "Diet, Nutrition, And Health,"
  article deadline **November 15.**



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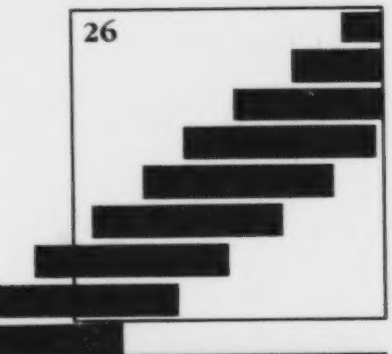

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The Rural-Urban Exchange

Stephanie Brown, Baltimore City Extension Director and Ellen Varley, Extension Communications Agent, Baltimore City and Dana Grabiner, Free Lance Writer, Baltimore, Maryland

Jimmy Wayne Kinder raises 1,500 head of cattle on his family's 4,000-acre ranch near the Red River in Walter, Oklahoma. For years he has been concerned about cholesterol and wondered how city people feel about the beef they eat.

Last spring, 27-year-old Kinder and more than two dozen other Oklahoma ranchers and farmers were among the first to participate in an Urban Learning Experience (ULE) in Baltimore, Maryland, and learn about city folks face to face.

Kinder and the others were part of the Oklahoma Agricultural Leadership Program (OALP), an intensive, 2-year project designed to groom young agricultural leaders of the future. As part of the program, the ULE introduced these agricultural business people to their urban customers.

Understanding Urban Problems

"As future agriculture leaders, they must understand urban problems and lifestyles," says William Taggart, OALP director and formerly the director of the Cooperative Extension Service at Oklahoma State University. "The city experience can provide a crucial link between the producer and the consumer that was missing before," Taggart comments.

Opposite: Urban Learning Experience participants from Oklahoma view a model of Baltimore's future revitalization areas during a visit to the Baltimore Economics Development Corporation. Top: At a 4-H greenhouse, Wanda Trent, horticulture agent, describes the methods used by Baltimore 4-H'ers to "grow fish" in an aquaculture pond. Below: The Jessup Wholesale Market impresses Oklahomans with its many species of fish and crustaceans.

Says Vernon Roberts, president of the Baltimore City Cooperative Extension Service Advisory Board which approved the ULE project: "It's important to train leaders and not just let them evolve. They need to know the needs of urban consumers so they can influence legislation in the right direction."

Another benefit was that Baltimoreans were able to dispel their own stereotyped impressions of rural people.

Lucille Gorham, for example, a 4-H volunteer leader and a member of the Extension Advisory Board, says she gained new insight into farmers as college-educated business people as much interested in promoting their products as any white-collar executive.

Opposite top: William Taggart, director, Oklahoma Agricultural Leadership Program (OALP) and representatives of the Oklahoma contingent meet with Baltimore City government officials at city hall. Seated left to right are: Taggart; Nathaniel McFadden, city coucil; Rochelle Spector, city council; Benjamin Brown, city solicitor; Thomas Wade, OLAP; Tony Genoff, OLAP; J.D. Vaught II, OLAP; and Stephanie Brown, Baltimore City Extension Director. Opposite below: Oklahoma visitors learn about the daily operations of the wholesale market at Jessup, Maryland. At right: Albert Sherard, Baltimore City Master Gardener, proudly shows the Oklahoma visitors his backyard "biological oven."

"I saw pork growers and beef growers debating the nutrition of one meat over another," Gorham recalls. "I saw them as salespersons for their products, rather than people who just send packaged meats for us to buy in the store."

Moreover, says Gorham, women in agriculture aren't the stay-at-home quilters and pie-bakers she once imagined. They are conducting viable businesses in addition to their farms.

City Tour
New impressions like these came from a packed 2½ days which took the Oklahomans from City Hall to a bustling food market. They visited a public school and an urban greenhouse and watched nutrition educators working with clients in individual homes. Business people, bankers, elected officials, ministers, and police officers all helped to round out the urban perspective by describing Baltimore's special concerns. By touring privately owned rowhouses, the Oklahomans saw for themselves the city's extensive redevelopment efforts. They saw Babe Ruth's birthplace and drove through the city's commercial revitalization areas such as the Inner Harbor.

They also were introduced to the Port Authority, which oversees one of the largest importing opertions on the East Coast. Rounding out the city tour, the group browsed through Lexington Market, the nation's oldest indoor market, and rose at 3 a.m. to visit a wholesale food and fish market in Jessup, Maryland.

ULE Results
The result of the Urban Learning Experience? "A refreshing exchange of perspectives," says Stephanie Brown, director of the Baltimore City Extension Service and organizer of the ULE. "We had to remember that these people from the wide open plains had probably never seen rowhouses or a fish market. The ULE helped give all of us a greater understanding and appreciation of one another's values and culture."

Taggart agrees: "Most of us are terribly ignorant of things we have never experienced."

Introducing rural people to a way of life they had only seen on television was the key to the ULE. For many of the Oklahomans, this was the first time they were exposed to a big city atmosphere, and it was only natural that some of them brought their own notions of city life.

"What surprised me the most was the sense of community, the mix of private and government functions all working together," says Naomi Shanks of Bixby, Oklahoma, who owns a

500-acre grain farm and pick-your-own vegetable tract 30 miles from Tulsa, a city about half the size of Baltimore. "I thought city people just didn't care about each other."

"We pride ourselves in our small town communities and I thought you'd lose that in a big city," rancher Kinder says. "But I saw there was a great effort among the city officials in making Baltimore a better place to live. When their eyes twinkled, you knew they meant it."

In turn, the Baltimoreans learned that farmers and ranchers are as concerned as city people about international trade, the U.S. currency rate abroad, and consumer food-buying trends.

"Years ago, we (farmers) used to just do our jobs and forget about the consumer and the international trade situation," says Kinder. "But we're finally starting to wake up and look around."

And now the Oklahoma rancher knows that city folks do appreciate his efforts to cut down on cholesterol by producing leaner beef. They told him, face to face. ☐

Forging Future Leaders

William F. Taggart
Director, Oklahoma Agricultural Leadership Program
Former Associate Director (Retired), Oklahoma Cooperative Extension Service
Oklahoma State University, Stillwater

STATE OF OKLAHOMA

Oklahoma agriculture is in a state of constant change, and with change comes concern. Farms and ranchers have become a part of the national and international scene. The lack of understanding between the rural sector and urban interests continues to grow. International trade has become a dominant factor in determining the future of Oklahoma agriculture.

These conditions led to the development of the Oklahoma Agricultural Leadership Program (OALP) for young adults actively engaged in farming, ranching, or affiliated agribusinesses. The 2-year program, developed by a state leadership council, is composed of recognized agricultural leaders working in cooperation with the Division of Agriculture at Oklahoma State University.

The Oklahoma Agricultural Leadership Program provides a select group of young adults with the training and experience that will enable them to assume leadership roles in the state of Oklahoma.

The program's objectives for participants include the following:

- Increase awareness of Oklahoma's agricultural industry in relation to local, state, national, and international problems and opportunities;
- Expand understanding of our nation's economic, political, cultural, and social systems, and how they affect agriculture in Oklahoma;
- Broaden perspectives on the major issues affecting agriculture and the American society;
- Increase abilities to analyze and react to the complex problems affecting Oklahoma agriculture and its rural communities; and
- Add to leadership involvement and activities at the local, state, or national level for the benefit of Oklahoma agriculture.

Two-Year Program

Subject matter in the 2-year program includes: leadership development, communications, economics and policy, international trade, institutions and agencies that serve Oklahoma agriculture, family strength, urban understanding, state and national government, water, energy, and other major issues affecting Oklahoma agriculture.

The intensive study programs involve several seminars held throughout the state, including on-site tours and studies of both agriculturally related and other businesses and industries. These cover procedures and problems in production, marketing, and financing. The curriculum stresses the total economic and social picture. Both developing and developed nations are studied as a part of the overall enrichment process of understanding relationships of the United States with the world. Participants attend an international study seminar on international customs and cultures.

Active Participants

The Oklahoma Agricultural Leadership Program is designed for men and women in the early stages of their leadership careers. Each class consists of 30 participants between 25 and 40 years of age who have been Oklahoma residents for at least 5 years.

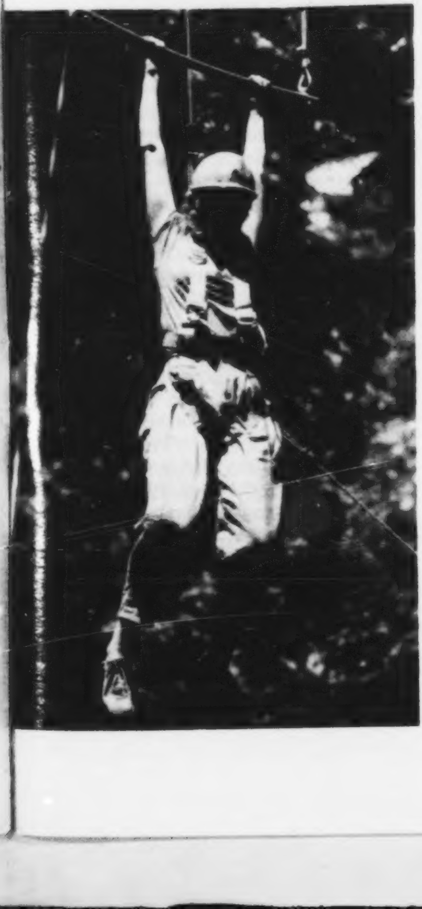
Candidates are actively engaged in production agriculture or in a related agribusiness corporation. Production agriculture applicants who are part-time employed off-farm are eligible. Approximately 75 percent of a class of 30 are applicants engaged in production agriculture.

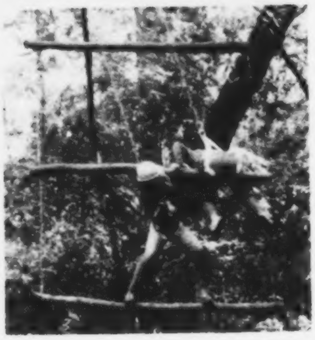
Advisory Council

Thirteen recognized leaders from Oklahoma's agricultural industry, including production agriculture, foundations, agribusinesses and farm organizations, are on the Advisory Council for OALP. The Council establishes the policy under which the program operates. Operationally, an internal advisory council consisting of the dean of agriculture, associate director of Cooperative Extension Service, and department heads in agricultural economics and agricultural education assist the OALP director. Also, university-wide faculty curriculum committee advises the OALP director on curriculum development and seminar program staffing. □

Californians Confront The Challenge

James Brenner
4-H Youth Program Leader, San Francisco/ San Mateo Counties, San Francisco, California and
Marta Stuart
4-H Youth Advisor
Santa Clara County
San Jose, California
and
Daniel Desmond
Director and 4-H Youth Advisor
Sonoma County
Santa Rosa, California





The 4-H Adventure Ropes Course combines challenge and adventure to develop leadership and other life skills. Primarily funded by private sponsors, the course is a Cooperative Extension team project for three Northern Californian counties. The sequence of challenges for youth and adults employs logs, cables, platforms, and ropes to inspire self-confidence and teamwork.

Three California counties are cooperating in a unique team project that combines challenge with adventure to develop leadership and other life skills.

The project is a 4-H Adventure Ropes Course for youth and adults in San Francisco, Sonoma, and Santa Clara counties.

The Ropes Course provides a sequence of exhilarating activities using cables, logs, platforms, and ropes. A day on the course focuses on the experiences that individuals and groups come to share. These experiences, in turn, focus on a number of life skills most of which are identified as essential leadership traits. Such skills include self-confidence, self-esteem, teamwork, and communications.

The activities and experiences are increasingly difficult and challenging. The day is laced with fun and begins with warm-ups and group trust games. A combination of individual and group activities carried out on ground level starts the process which gradually builds individual and group confidence.

The 4-H Adventure Ropes Course offers experiences that build group trust as well as increased agility and coordination.

Ground level activities include such group challenges as the "Mohawk Walk" where a group of individuals must move along a piece of stretched aircraft cable using only each other and their collective balance to meet the challenge. Eventually, the group works up to activities performed high above the ground such as balancing on a skinny log 30 feet up in the air or walking across a rope bridge suspended high among the trees (wearing a safety harness).

Team Leaders

Leaders are the key to a successful Ropes Course experience. The leaders are a unique blend of adult professionals and youth. They are volunteers with an interest in human development and "team leadership" in a setting of adventure and challenge.

4-H staff, working with outdoor adventure educators, developed a comprehensive leader development program. Prospective leaders must submit an application and commit to working on the ropes course a minimum of 1 day per month for 1 year.

Leaders pay $50 for the several weekends of practical training they initially receive. A looseleaf Ropes Course Handbook complements the "hands-on" training. Completion of the training qualifies individuals to serve as assistant leaders.

After serving an apprenticeship period of several days and demonstrating competence in critical skill areas, individuals are certified as team leaders. Team leaders have overall responsibilities in delivery of the ropes course experience.

Project's Beginning

The project began in San Francisco County over 5 years ago when the National Park Service issued a special use permit to the University of California to build and operate a course for urban residents. The Golden Gate National Recreation Area (GGNRA) provided a 1-acre grove of Monterey pine and cypress trees along with the support of staff committed to serving inner-city disadvantaged youth.

San Francisco's 4-H Adventure Program provided leadership in organizing local adventure programmers to develop and operate the Fort Miley 4-H Adventure Ropes Course.

Project Expands

News of the success of the Ropes Course soon spread both north and south of San Francisco. In Sonoma County, 50 miles north of San Francisco, a second 4-H Adventure Ropes Course called Challenge Sonoma began operating in the spring of 1985.

The Alum Rock 4-H Adventure Ropes Course located in Santa Clara County on the southern tip of San Francisco Bay began in the summer of 1985.

In Sonoma County many youth agencies had long been interested in an inter-agency project which would be targeted toward youth at risk but which could also be used by the broader community. In 1984, a group of Sonoma individuals familiar with the San Francisco Adventure Ropes Course got together to formulate a proposal.

The diversity of this initial group points to the broad appeal of the Ropes Course. Along with Extension, organizations that were represented included the Sonoma County Office of Education, Hewlett-Packard, Social Advocates for Youth, and the Sonoma County Superior Court.

Alum Rock Adventure in Santa Clara County provides insight into the Ropes Course Program's insight into the Ropes

The Ropes Course eventually works up to tasks high above the ground. Trained leaders provide supervision and risks are minimized through strict safety measures.

Course Program's ability to generate community interest, enthusiasm, and resources. In 1984, after a year of planning and design work, San Jose's City Council approved an 18-month Land Use Agreement permitting the Adventure Ropes Course to be built in a primitive city park under 4-H direction.

One year earlier, a local foundation provided $5,000 to support the planning and design phase. During this year, over 25 individuals were involved in the project's advisory committee. They represented "grass roots" community youth agencies, law enforcement agencies, schools, private consultants, and various other agencies.

By the summer of 1985, funds had been raised from a variety of sources including donations from high-tech industry and individual contributions. A dedication ceremony in May 1985 brought over 350 people together to celebrate the opening of the Alum Rock 4-H Adventure Ropes Course.

Positive Results

What has the Ropes Course meant to 4-H programming in these three California counties? First of all, the counties attracted 240 "new" leaders to 4-H programming. These represent a new style of leader with a new set of skills and a new sense of purpose. Another far-reaching result is the establishment of a formalized team project among the three counties where long-range planning and resource development takes on a regional perspective. In addition, 11,000 participants have been exposed to challenge and adventure experiences which have contributed to their personal growth and leadership abilities. □

ADVENTURE ROPES COURSE SONOMA CHALLENGE

Community Leadership Development—A National Extension Effort

W. Robert Lovan
National Program Leader, Leadership Development and Community Decisionmaking Structures, Extension Service, USDA
and
Daryl Heasley
Extension Leadership and Community Development Specialist and Director, Northeast Regional Center for Rural Development, Pennsylvania State University, University Park

Throughout its history, Cooperative Extension has been committed to developing leadership capacities in the people it serves. In recent decades, this interest has been translated into an increasing variety of educational programs aimed at developing effective public leadership.

Decentralization of public programs continues to place increased decisionmaking responsibilities on local government officials and community leaders. There are approximately 53,993 units of local government in rural areas—cities, counties, schools, townships, and special districts. Over 2 million people are employed as local officials in these units. Over half of these officials are associated with schools while the remainder serve in a range of local service functions. There are 318,000 elected officials of which 40 percent vacate office after one term.

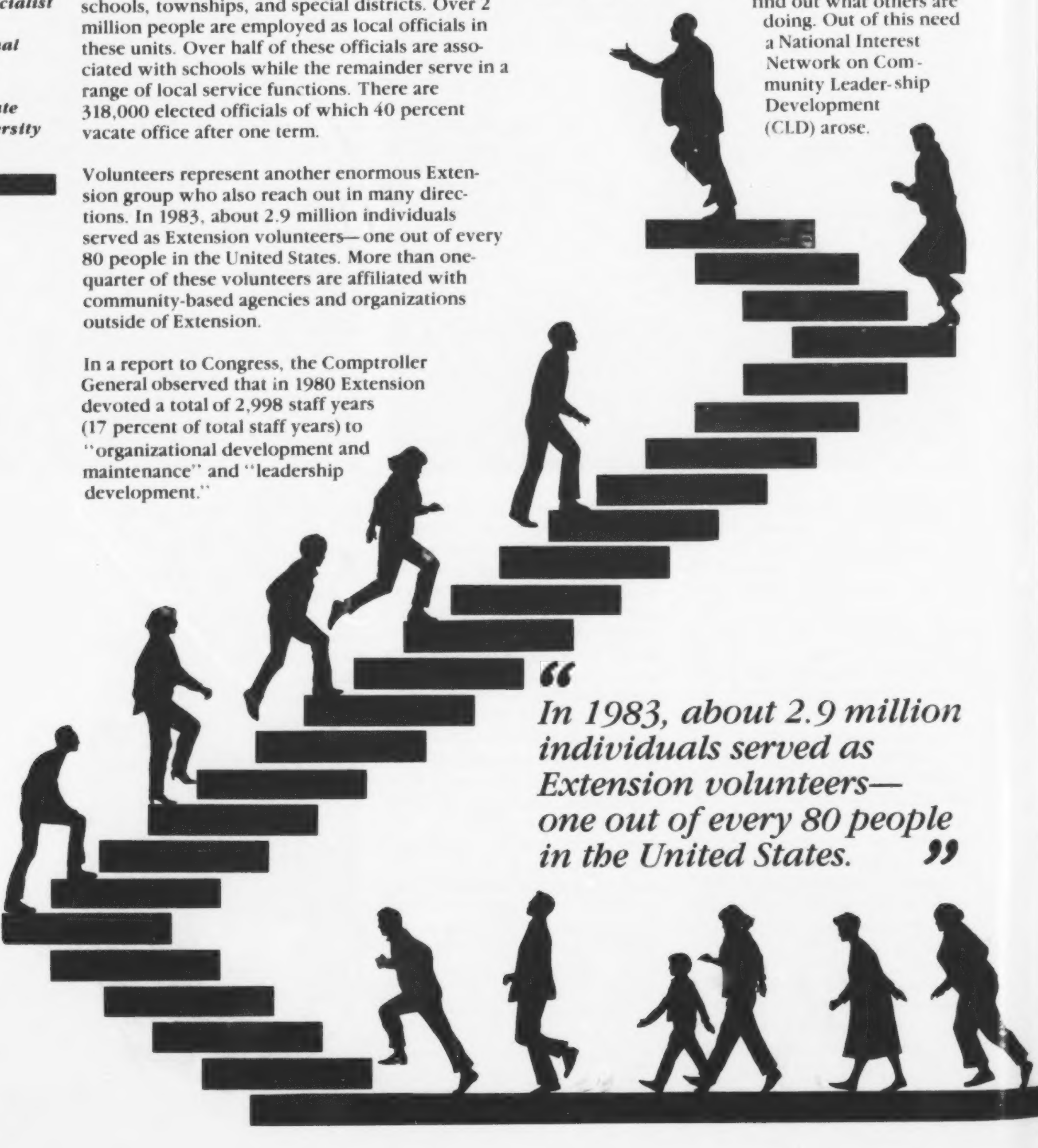
Volunteers represent another enormous Extension group who also reach out in many directions. In 1983, about 2.9 million individuals served as Extension volunteers— one out of every 80 people in the United States. More than one-quarter of these volunteers are affiliated with community-based agencies and organizations outside of Extension.

In a report to Congress, the Comptroller General observed that in 1980 Extension devoted a total of 2,998 staff years (17 percent of total staff years) to "organizational development and maintenance" and "leadership development."

A Continuing Challenge

As a result, community leadership development is expected to be a continuing area of responsibility and challenge to all Extension personnel. There is a need to strengthen the system of disseminating program-related information in support of community leadership without adding new demands on already limited state Extension budgets.

Increased activity in Extension's community leadership development programs created a desire, by those involved in such programs, to find out what others are doing. Out of this need a National Interest Network on Community Leader-ship Development (CLD) arose.



> *"In 1983, about 2.9 million individuals served as Extension volunteers— one out of every 80 people in the United States."*

The original concept was due to the efforts of Les Frazier (retired), Kansas State University Cooperative Extension. The ECOP Subcommittee on Community Resource Development and Public Affairs, the four Regional Rural Development Centers, and the federal ES-USDA partner have teamed up to support the CLD Interest Network.

CLD Interest Network

The primary purpose of the Interest Network is to serve as a catalyst in identifying and nurturing a support system for Extension community leadership efforts. 1. Mechanisms for identifying appropriate people to participate in a community leadership network of communications; 2. methods of giving leadership to a system of sharing information in support of community leadership efforts; and 3. potential support resources for network projects.

Communication Functions

A 1983 survey report highlighted ongoing program content, target audiences, evaluation of leadership programs, perceived needs for materials, and research on leadership. A 1986 CLD reference publication presents information on four major areas:

1. Extension's present CLD programs; 2. Extension initiatives; 3. summary of the CLD research literature and knowledge base; and 4. CLD Directory of Extension and contacts and organizations outside of Extension.

An early outgrowth of the Network is a study of "Research-Extension Linkages for Community Leadership Programs" by Fear and Thullen of Michigan State University. The study introduces a literature-based framework and offers five theoretical approaches to community leadership development. A national meeting, "CLD Networking for a Revitalized Rural America," is planned for Cincinnati, Ohio, on September 9-11, 1986.

Many Extension efforts, regardless of program affiliation or position responsibility, provide training or support to citizens and groups that aid public decisions contributing to the resolution of community problems.

Network Work Group Tasks

Primary network action is through informal "work groups." Identified needs to support community leadership programs include:

- *Sponsored Leadership Programs Outside of Extension*—Utility to Extension of leadership development programs and materials in the private sector, both profit and nonprofit organizations.

- *Innovative Research in Community Leadership for Program Development*—Develop frameworks for models that are effective across all Extension program or subject matter areas to identify research questions and priorities.

- *Models for Achieving Community Leadership Integration Across all Extension Programs*—Examine current efforts that cross Extension program areas and determine best methods for establishing a dialogue for cross-program linkages.

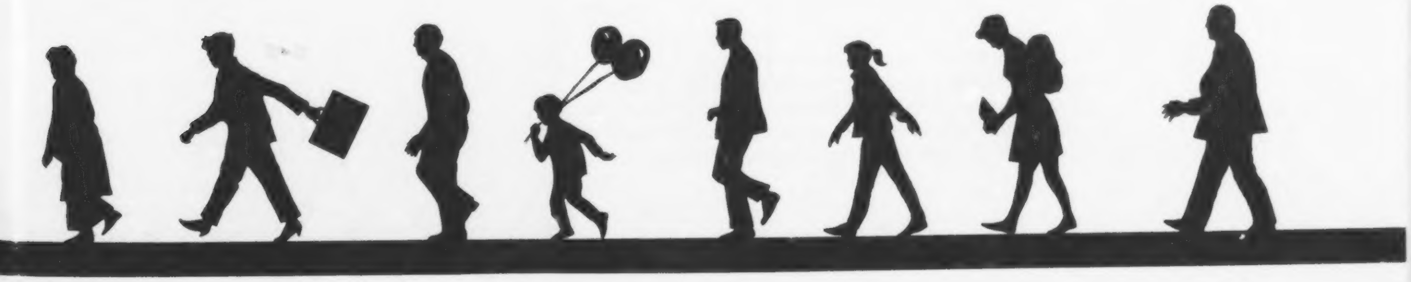
- *Glossary of Leadership Concepts*—Clearly communicate problems and priorities of community leadership to researchers, and program leaders within and outside of Extension.

- *Investigate "Fugitive" Community Leadership Research Programs*—Much research of relevance to community leadership is conducted in different disciplines and therefore is not always identified as community leadership research.

- *Anticipate and Plan for Community Leadership Decisions*—Decisions community leaders make will have both anticipated and unanticipated consequences. Community leaders need to be aware of the socioeconomic and technical impacts of these decisions.

- *Process for National Program and Policy Development*—Local leaders must understand the process by which state and national policies and programs are developed and the implications at the local level.

- *Cross-Cultural Community Leadership Process and Behavior*—Gather information for community leadership development models that have application across divergent cultures and socioeconomic groups. □



New Volunteer Source—Where The Kids Are

Carmen Burrows
Extension Agent 4-H
Ramsey County
Extension Office
St. Paul, Minnesota

Extension in Ramsey County, Minnesota, is reaching a new kind of volunteer leader who can't easily come out to meetings but who spends many hours each week informally teaching children.

The volunteer leaders are child care providers. Since the winter of 1984, about 121 new volunteers and 2,318 children have participated in a 4-H program developed especially for them and managed by just one 4-H assistant.

Child care providers are one of the fastest-growing human services groups in metropolitan areas. As more and more parents work outside their homes, child care providers increasingly are cropping up in many neighborhoods. Some are in franchised, licensed, nationally advertised child care centers; some are young mothers who keep other children so they can stay at home with their own; and some are sponsored by churches, public funding, or community agencies.

All have in common lots of children for lots of hours and a need for high interest, attention-keeping activities for youth!

Due to mushrooming numbers of child care homes, and lack of preparation time and educational linkage for some providers, there is little contact with in-service education in child development theory or in learning activities. Informal curriculum, except in very creative child care homes, is scarce. And those who have an educational program are anxious for new ideas.

Pilot Program

Based on this knowledge, and previous experience in conducting activities with pre- and after-school children, 4-H Agent Carmen Burrows and former 4-H Community Program Assistant Diana Neumann piloted a correspondence series with licensed providers in child care homes and centers.

Knowing that food is one of the highest-interest areas for 3- to 10-year-olds, and that some children have two meals and two snacks at their "home away from home," Burrows and Neumann focused on a six-part series on nutritious snacks.

Each segment began with a very specific outline for volunteer teacher-leaders who would perhaps not ever talk to an Extension staff member, although many called for clarification and extra materials.

Segments included nutrition background information, fitness exercises, cultural foods, food preparation activities, vocabulary, riddles, creative art and writing activities, and discussion questions.

Initially, 4-H staff sent child care providers an introductory letter, a sample lesson, an explanation of the series, and an enrollment form for all the necessary demographic data on the young participants. To receive the series, the child care leaders returned the enrollment forms to the 4-H Community Program Assistant. She, in turn,

mailed a packet to each leader every 2 weeks. At the end of the series, the children who participated received 4-H certificates. Volunteer leaders were asked to complete an evaluation form.

Scope Increased

The second series, called "Exploring 4-H," included a variety of 4-H "project" activities: use of small appliances; beginning consumer awareness; natural science; creative arts, drama, and writing; and nutritious snacks.

For fall 1985, the series covered first aid and safety. A 4-H volunteer leader and community program assistant in Hennepin County, Minnesota, developed the series.

Hennepin County staff also revised Ramsey County's nutrition series and started a correspondence series for about 1,000 youth in child care there.

Positive Feedback

The initial response to the packets has been positive. Evaluation comments on the "Exploring 4-H" series indicated: The majority of those responding used 50 to 100 percent of the materials. Art ideas and games rated most helpful; science experiments were second; recipes received mixed ratings. Most of the respondents liked the 4-H certificates available for their youth and expressed a wish for similar materials in this format.

Many of the goals have been met:

- To enhance the quality of learning activities offered by child care providers;
- To increase 4-H visibility among metropolitan families whose children attend child care programs;
- To recruit new volunteers who may begin as special interest (correspondence series) 4-H leaders, but who may continue by establishing 4-H clubs and drawing parents into parent-child interaction projects; and
- To invite child care groups to participate in county 4-H events.

Implications For The Future

In future series 4-H staff hope to use radio, computer software, and cable TV to further enrich the printed material. These offer more ways of stretching fewer Extension staff to more volunteers who have high-intensity, high-impact time with youth and close touch with families. □

Opposite: Extension in Ramsey County, Minnesota is reaching volunteer leaders in the human services group known as child care providers. Diana Neumann, left, director of the Falcon Heights Extended Day Care Center, discusses a quilt square project with a youth. Top left: Neumann provides guidance for a youth activity. Below: Tasha Senrich begins a 4-H enrichment activity at the Falcon Heights Extended Day Care Center. Top right: Neumann helps thoughtful Mike Peterson create a Fourth of July design.

Allerton Park—Training Ground For Emerging Leaders

Robert Sampson
Visiting Communications Specialist, Cooperative Extension Service, University of Illinois, Urbana

They came from 12 states, from communities as diverse as Spokane, Washington; Philadelphia, Pennsylvania; and Humboldt, Iowa. Among them were lawyers, bankers, chamber of commerce executives, and local government officials.

For 5 days, they spent 14 hours daily in a beautiful but isolated rural Illinois conference center, attending classes from early morning to late evening, all in pursuit of economic development.

These men and women are an emerging leadership resource in their communities. As one speaker told them, "In your town, you **are** economic development."

They were at the conference to develop new skills and sharpen recently acquired ones.

Since 1970, the University of Illinois Cooperative Extension Service, in conjunction with the university's Department of Geography and the Mid-America Economic Development Council, has sponsored a Basic Economic Development Course at Allerton Park, a university-owned park and conference center located about 20 miles from the Urbana-Champaign campus.

Part Of Four-Year Program

"This is one of 12 basic courses held throughout the year around the country for beginning professionals," explains John Quinn, Extension area advisor at the University of Illinois, who helped to organize the first conference and the others that have followed. "It's part of a 4-year program of professional education for those in the economic development field that eventually leads to professional certification as an economic development specialist through the American Economic Development Council."

Included in the 30-plus hours of instruction at the course, held October 1985, were classes in industrial site selection, financing, law, economic geography, community planning, computers, and retention and expansion of existing industry.

The 20 instructors for the course were national experts in the field—people like Robert Cassell, executive director of the Southern Industrial Development Council of Atlanta, Georgia.

"This whole business has changed dramatically for the better since I got into it 40 years ago," says Cassell. "When I got into the business there weren't any conferences or books or magazines from which to draw ideas. You went to meetings and looked for old grayheads and tried to pick their brains."

Now, people are "picking" Cassell's brain. He is a self-described generalist in a field that has become increasingly specialized with experts in financial structuring, locating funding sources, putting together financial packages, and the like. "The whole business has become so sophisticated that courses like this are mandatory," he says.

Allerton Course's Beginnings

When Quinn got together with the late Howard Roepke of the University of Illinois' Department of Geography in the late 1960s to hatch the idea for the Allerton course, economic development was still a field in its infancy.

"In fact, it was still known as industrial development," remarks Quinn. "But Howard was already very active in conducting studies and working with national leaders. He was operating a similar program for an area utility."

Quinn was conducting a series of unrelated seminars for Cooperative Extension at Allerton and was sold on the rural setting's advantages for learning. He soon caught Roepke's enthusiasm for economic development training and the men organized the first basic course in 1970.

Steadily, the course grew and became known as a training ground for leaders. Word of mouth has triggered interest that has, in turn, forced expansion. Also helping is the steady progress of early attendees, people like Richard D. Durkin, regional administrator for the U.S. Small Business Administration in Chicago, who was a student and now is an instructor.

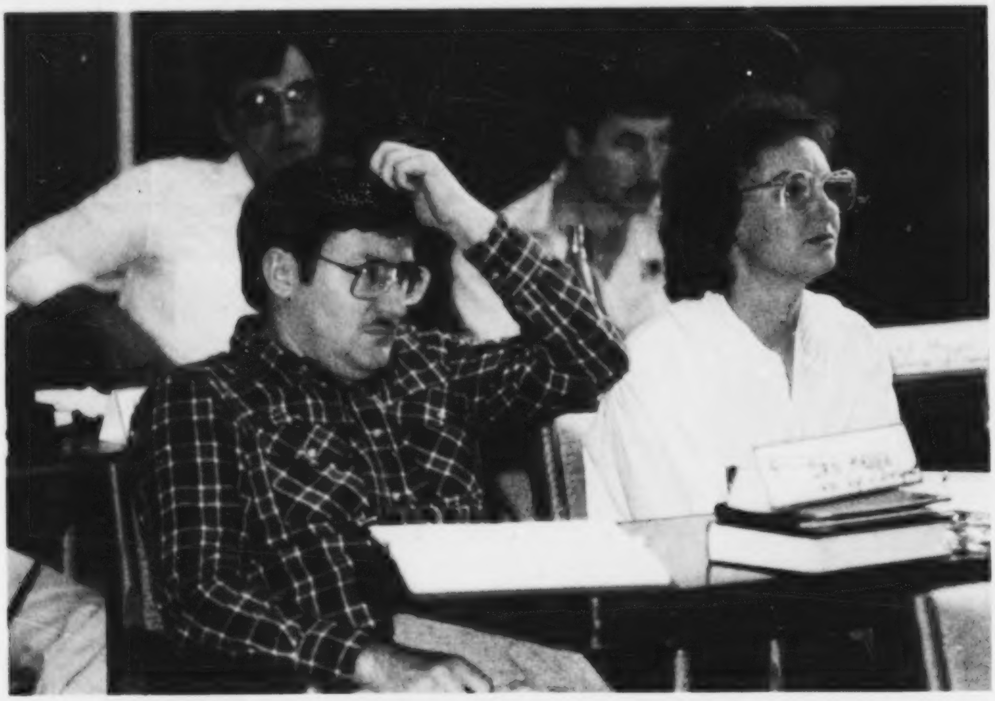
Environment Enhances Learning

One key to the success of the Illinois course, Quinn says, is the Allerton Park environment. Commuting by students is discouraged. At Allerton House, a Georgian-style mansion that once served as a millionaire's home, the participants spend nearly every waking hour together.

"That's the basic reason we go back to Allerton every year," says Quinn. "We believe the after-class discussions are very important. The students learn very quickly and establish professional relationships that prove invaluable down the

Opposite: The Basic Economic Development Course at Allerton Park, a conference center near the University of Illinois, is a focal point for emerging community leaders. Conducting an Allerton Park seminar are John Quinn (left), Extension area advisor, University of Illinois, an organizer of the economic development training course, and Robert Cassell, instructor, and director of the Southern Industrial Development Council, Atlanta, Georgia.

Left: Over-view of a seminar in session at Allerton. Initiated in 1970, the course has a national reputation as a training ground for community leaders.



pike." Networking also provides the opportunity to share approaches and problems.

"That's one of the reasons I attend," says William Davenport, coordinator of economic development for the Minnesota Chippewa Indian Tribe. "I like to go to these meetings to get new ideas."

Davenport is in charge of economic development for six Indian reservations, including one with a 65 percent unemployment rate.

While Davenport represents 45,000 people afflicted with a variety of tough economic problems, Lenna Rowe has the enviable task of representing Clinton, Illinois, a town of 8,000 with a soon-to-be-completed nuclear power plant and located only a few miles away from a new Mitsubishi auto plant site.

A local bank and a savings and loan association chipped in to send her to the course. "We have so many things to offer in Clinton, now we need to implement a strategy," Rowe says. "We need to know how to attract industry and business. We can't sit back and wait for it to come to us."

Similar Goal Shared

Facing a different set of problems but sharing a similar goal is Paul McNamara, who came to the course from Cahokia, Illinois, a community of about 15,000 located across the Mississippi River from St. Louis.

"The classes serve to fill in some of the gaps in my professional training," says McNamara, who is planner-risk manager-economic developer for the Village of Cahokia.

McNamara's challenges are the ones faced by his peers in the Northeast-Midwest region—declining industrial base and unemployment—aggravated by local conditions, such as Mississippi River flooding and the perception of environmental problems.

"Already, the speakers have jogged my memory and got me thinking in new directions," he says after the first day of classes.

And the Allerton Park atmosphere is working, too, just like Quinn promised.

"I think one of the big advantages is meeting other people in the same field," says McNamara. "You begin to learn that you're not in this boat by yourself. Everybody's got the same problems." □

Diversity Does It!

Mary Kay O'Hearn
Extension Communication Specialist, Communications Resources, University of Minnesota, St. Paul

Roger Moe (right), state senate majority leader, meets with members of the Red River Valley Emerging Leadership Program on their visit to the Minnesota state capitol

"When you find a Twin Cities attorney and a farmer discussing an issue, there are new perspectives!"

That was one of the strengths of the Minnesota Emerging Leadership Program, says Richard Byrne, program director and Northwest district Extension director. Although this 2-year program, one of several dealing with emerging leadership in Minnesota, was completd in 1985, the 30 participants hope it can be continued for a new group.

The program's objectives were to enable young Minnesota leaders to improve their skills dealing with community problems and enhance their participation in the public decisionmaking process.

Attendance By Governors

Over the past 2 years, three former Minnesota governors spoke before the group. Some of the topics at a meeting in Morris, Minnesota, indicate the breadth of discussion: Theories of Leadership; Main Street Project; Minnesota's Role in the International Market Place; Japanese Trade and Trade Deficit; Hunger and Poverty; Foreign Culture; and Communications.

"Ours had an equal number of rural and urban participants—that means diversity and learning," Byrne says.

Byrne had served on the program's curriculum development committee before accepting the director's position in March 1985 from Tom Halbach who is now serving as ES-USDA national program leader for environmental quality with Natural Resources and Rural Development in Washington, D.C.

Only those who showed potential for leadership on a city council or a county commission were strong candidates for the program. Local Extension offices helped select individuals representative of interests in each of the four program areas. A few Extension agents and program assistants were numbered among the 30 participants.

Left: Richard Anderson (right), director, Southern Experiment Station, Waseca, Minnesota, conducts a station tour for participants in the Minnesota Emerging Leadership Program. Opposite: The Leadership group picks their way through a cornfield on their tour of the Southern Experiment Station.

Photographs courtesy of Don Breneman, Extension Communications, University of Minnesota.

Wide Range of Opinions

One of the participants, Bruce Battaglia, took time off from his job as a business administrator at Honeywell, and then worked weekends to make up the time missed. "It's a well-organized program and we were exposed to a wide range of issues and opinions," Battaglia says.

Another participant, Sherry Dessonville, a dairy farmer near Madison, learned during her 2-year participation that a leader helps to develop new leaders. "I recently made a tough decision to step down from a leadership role I really enjoyed," she says. "Yet I quickly found someone willing to help when asked."

That's the upside of the program—the enthusiasm generated as rural and urban citizens from all over the state learned from each other while working together to enhance their leadership skills.

Halbach, who retains his interest in the program, considers it "one of the most innovative and intense programs I know about."

Each participant contributed $500 a year toward the program or received a scholarship. Although job transfers caused a few dropouts, most of those who started the program completed it.

Singular Experience

"It's the kind of educational experience these people can't get elsewhere," says Patrick Borich, Minnesota Extension director. "My desire is to continue it."

Because funding is a problem, Borich is exploring participation from other areas of the university.

One spinoff from this statewide program—the Red River Valley Emerging Leadership Program—met from January to November in 1985 with 32 participants from 14 counties in northwestern Minnesota.

The program, coordinated by Barbara (Klixbull) Muesing, an Extension district director, was developed to recognize potential leaders from the area.

Participants cited their businesses, communities, organizations, and governmental groups as places likely for them to have the most influence as they developed six areas of leadership skills: motivating others and gaining cooperation and involvement; acquiring communication and public speak-

ing skills; identifying problems; effecting change and formulating ideas; building self-confidence; and maintaining a positive attitude.

Network Developed

"The participants not only learned about leadership and issues facing the valley, but also developed a real network among themselves which I believe will have lasting value," Muesing comments.

A three-part series program, called "Women and Government in 1985," encouraged women to become involved in politics. Minnesota Lieutenant Governor Marlene Johnson was a guest speaker on one of the programs. Vickie Paurus and Sharon Torbenson, Extension agents in East Otter Tail and Becker counties, respectively, initiated the program.

Identifying Leaders

All 60 Extension agents in northeastern Minnesota attended a mandatory course called Social Action Process Training in the winter of 1984-85 which helped them identify leaders in their communities. Robert Sopoci, the only Extension worker in Cook County, developed a reputational power study by interviewing knowledgeables in the community for a consensus on who the power actors are in the county.

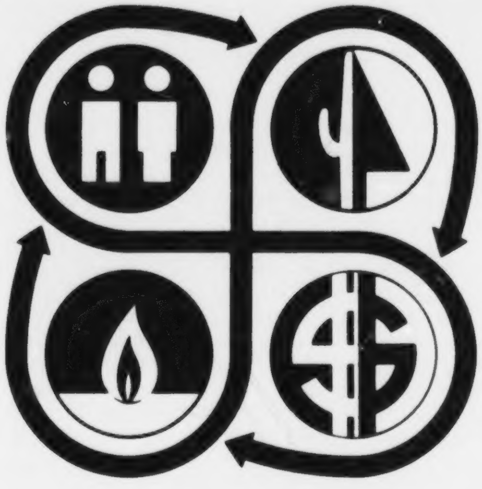
Sopoci believes the study needs updating every 2 years to remain current since leadership roles move around.

Some emerging leadership training is in store for some 30 agricultural program agents and specialists in an internal leadership program to promote proactive rather than reactive roles as agricultural leaders, comments Gerald Miller, assistant director for agriculture.

"Business people and former county agents have indicated that agents and specialists need this training so that more people are recognized as leaders in agriculture," says Miller. □

Let A Contract Be Your Guide

Arlen Etling
Extension Rural Development Area Agent, Cottonwood, Arizona



- Charles Eckman helped organize the Verde Valley Water Users Association in Arizona which assisted irrigators filing for their water rights. Potential savings to irrigators: $140 million.

- Alan Kessler initiated the organization of an Arizona Chapter of the Center for Holistic Resource Management, an organization devoted to improved range management. Thirty ranchers attended the first meeting and all left supporting the new Chapter.

- Norman Fish worked with local government to plan a Town Hall meeting for his rural community. The Town Hall meeting, which successfully helped residents to identify local problems and their possible solutions, was so successful that it may become an annual event.

What do these individuals have in common? All are receiving leadership training through CENTRL (Center For Rural Leadership), a statewide training program organized by the University of Arizona and agricultural organizations with a grant from the Kellogg Foundation. All are required to plan an "internship," a community service project where they can apply their leadership training. These internships are guided by "learning contracts."

Learning Contracts

Not a recent innovation, a learning contract is simply a contract you make with yourself or someone else to learn specific skills or knowledge. Included are learning objectives and a procedure for accomplishing the objectives within a deadline.

Advantages are many. A learning contract is learner-centered so that the learner chooses the content and method, initiates the process, and sets the pace. If teachers or supervisors are involved, they must sign the contract to indicate that they understand and approve.

A writen contract helps learners think through the procedure, anticipate problems, and avoid costly mistakes. It also helps identify resources needed to complete the contract. A final advantage is that evaluation is built in.

Successful Applications

Learning contracts were popular in high schools during the educational experimentation of the late 1960's. Since 1968, the University of Massachusetts' School of Education, widely recognized for innovation in education, has used learning contracts to guide individualized graduate study programs.

At the University of Arizona, graduate students and undergraduates in the Extension education curriculum have used learning contracts to develop needed competencies.

4-H also uses a learning contract for older members who wish to enroll in a project for which there is no project leader. A "self-determined project contract" is required.

Extension
education

CENTRL Internships

None of the learning contracts mentioned above, however, leads to the tangible results associated with the CENTRL internships. The contract form asks for four kinds of information: The general goal; specific objectives which will fulfill the goal; a procedure for each objective; and a place for all involved to sign off.

Rural development agents are available to help write the contracts and to advise the learners when they encounter problems.

Initial Reluctance

At first, CENTRL trainees were hesitant to try an internship. In 1983, the first class of 30 selected trainees started the two-year curriculum and met 12 times for concentrated weekend sessions.

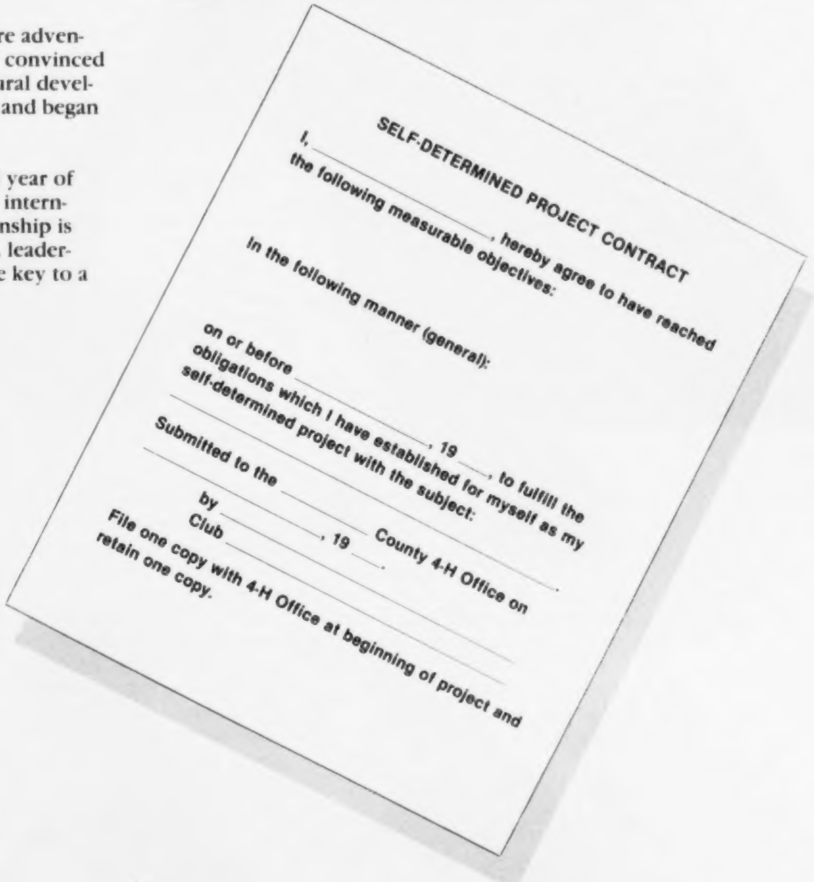
Rural development agents who helped organize the CENTRL curriculum did not insist all trainees plan an internship using the learning contract form. Internships were suggested as an opportunity not as a requirement.

Confidence Builds Success

Attitudes changed, however, as the more adventurous trainees tried the internship and convinced colleagues to try the experience. The rural development agents gained confidence also, and began to promote the idea more aggressively.

A third of Class II, early in their second year of CENTRL, have already completed their internships. Now many trainees feel the internship is the most valuable part of their CENTRL leadership training. Learning contracts are the key to a successful internship. ☐

PEOPLE
ENVIRONMENT
SERVICES
ECONOMY



SELF-DETERMINED PROJECT CONTRACT

I, ____________, hereby agree to have reached the following measurable objectives:

In the following manner (general):

on or before ____________, 19 ___, to fulfill the obligations which I have established for myself as my self-determined project with the subject: ____________.

Submitted to the ____________ County 4-H Office on ____________

by ____________, 19 ___.

Club ____________

File one copy with 4-H Office at beginning of project and retain one copy.

Good Health For Mothers And Babies

Sandy Stegall
Extension Communications Officer, University of Missouri, Columbia

Peggy Kelly, a young mother from Alton, Missouri, has two children, ages 5 and 3, and another is on the way. This summer she attended an informational workshop in her friend's home. Part of the discussion led by an Extension Master Volunteer (EMV) centered around nutrition for mothers and infants.

Kelly and other women gained new insight into the dietary changes and added nutritional requirements necessary during pregnancy.

Kelly's friend, Rebecca Mock, also attended the week-long sessions. She has a 1-year-old and is expecting a baby in April. After hearing a friend tell about her child ingesting a large number of vitamin-with-iron tablets Mock placed them in a locked medicine cabinet and—as another precaution—keeps the number of the nearest poison control center near the phone.

Kelly and Mock are among a number of pregnant and lactating women and women planning pregnancy who have received valuable information about nutrition and health through workshops around the state.

Extension-trained Master Volunteers teach the sessions which cover nutrition during pregnancy, health concerns during pregnancy, breastfeeding, infant nutrition, early childhood health, and common health problems.

The project—called Extension Master Volunteers: Healthy Mothers/Healthy Babies—began in 1983 when Extension Service, USDA, staff asked Gail Imig, University of Missouri program director of home economics Extension, to develop training materials to use in delivering educational programs in maternal and child health.

Imig involved three University of Missouri-Columbia Extension staff members who wrote a funding proposal. In the spring of 1984, the March of Dimes granted $10,000 to the project, the National Extension Homemakers Council granted $5,000, and Extension Service, USDA, made an additional $10,000 available.

Lyn Konstant, state food and nutrition specialist; Barry Kling, state specialist for health education; and Chloe Padgitt, coordinator of the Master Volunteers Program, wrote a trainer's manual and a volunteer instructor's guide.

The newly developed materials were pilot-tested in three sites with four Missouri area Extension food and nutrition specialists organizing the events.

Need For Education

The need for a maternal and child health education program in the United States is seen in the maternal and infant mortality rates. Although the United States ranks 17th or 18th among nations in infant mortality, "There are pockets of infant mortality in this country that are as bad as anywhere in the world," Kling says. The United States is the only Western industrialized country without a national policy providing adequate prenatal care to all women, Kling says. "Thousands of maternal and infant deaths and illnesses occurring in this country each year are preventable."

Volunteer Instructors

The program relies on volunteers in a community to do the health teaching. A volunteer may be a mother already involved with such groups as Extension homemaker councils, LaLeche League, city health or hospital employees, church workers, or the YWCA.

Volunteers are carefully screened and oriented and are provided with the materials they will need to work with class participants.

The trainer's guide offers information on recruiting an audience, screening and selecting appropriate volunteers, and promoting and evaluating the program. Trainers are urged to model appropriate teaching behavior by teaching the lessons in exactly the way they want the volunteers to teach.

Research-Based Curriculum

Sharon Gann, H.O.S.T. area food and nutrition specialist in Houston, Missouri, appreciates the research base of the Healthy Mothers/Healthy Babies curriculum. "The materials are based on fact; it's not just somebody sitting down and writing their viewpoints," she says.

Kling says a research base is something a university-sponsored program can provide that many other organizations cannot. The Healthy Mothers/Healthy Babies materials are based not only on epidemiological information about the risks of infant and maternal health problems, but also on proven successful educational methods.

Although the materials are research-based, they are written in simple, direct language applicable to nearly any group. In addition, the trainer's guide includes a section on adapting the information to high-risk, low-income groups.

National Thrust

Recently the Healthy Mothers/Healthy Babies curriculum has taken on a national thrust. The March of Dimes granted the University of Missouri Extension $15,000 for national distribution.

In September, the team of Kling, Konstant, and Padgitt trained 33 people at the National Extension Homemakers Council meeting in Estes Park, Colorado. Later in the month, 35 registrants from 27 states attending the National Association of Extension Home Economists annual meeting were trained in San Diego, California.

The team plans to work with other national groups to obtain broader dissemination of the materials. "The need is so great," says Padgitt. "It's frightening to see what poor health certain segments of our population are in when it comes to pregnant mothers and nursing babies."

Now through Extension Master Volunteers: Healthy Mothers/Healthy Babies, members of the public who care can make a real difference in young lives.

Excerpted from *Exclaimer*, a publication of the Cooperative Extension Service, University of Missouri and Lincoln University. □

Educational Leadership: The Decade Ahead

David W. Dik
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Extension Field
Operations, Cornell
Cooperative Extension,
Ithaca, New York

In the decade ahead, the leadership required for Cooperative Extension must differ greatly from the patterns of the past. A wide gap still exists between the concept of new leadership styles and actual practice.

Changes in leadership have not kept pace with the shift from the labor and capital intensive society/economy to the information intensive mode. Surely most educational enterprises, including Cooperative Extension, cannot be exempt from these transformational forces.

Already many contemporary writers have sounded the alarm about the need to change. Blanchard, *The One Minute Manager;* Naisbitt, *Megatrends and Re-inventing The Corporation*; Drucker, *Innovation and Entrepreneurship*; Toffler, *The Adaptive Corporation*, and many others, have been in the lead identifying some of the transitions taking place. The principles of leadership in these books apply to most organizations and institutions and they can be adapted and applied to Cooperative Extension as well.

The Need For A Change

As a society, we find ourselves on the threshold of a change in technological conditions that will affect human organizations and corresponding leadership more than has ever been the case in human history.

Technology has, in large measure, been responsible for these shifts in society. Peter Drucker in his recent book, *Innovation and Entrepreneurship*, was emphatic about the changes taking place. "We are indeed in the early stages of a major technological transformation," he writes, "one that is far more sweeping than the most ecstatic of the 'Futurologists' yet realize, greater than *Megatrends* or *Future Shock.* Three hundred years of technology came to an end after World War II."

The Cooperative Extension System is involved in this change and has, in fact, sometimes created it.

Today's Extension leaders and staff often find themselves dealing with the three "waves" of influence, the Agricultural Age, the Industrial Age, and the Information Age, simultaneously.

Barriers To Overcome

Many educational organizations desire to change and adapt, but face built-in barriers to this adaptation.

Some of these barriers are:

- organizational structure paralyzes leadership and change is slow or nonexistent;
- staff pride and self-esteem often embody conformity;
- perpetuation of existing structure necessary for enhancing self-worth of organization leaders; and
- most leaders focus on maintenance and preservation of the organization, especially in times of crises.

John D. Rockefeller, III, related to this inherent condition with words that have direct application to Cooperative Extension: "An organization is a system with a logic of its own, and all the weight of tradition and inertia. The deck is stacked in favor of the tried and proven way of doing things and against taking risks and striking out in new directions." One could rightly question tinkering with success. But in the current environment of competition, to overlook the effects of the major forces impacting on Cooperative Extension invites trouble.

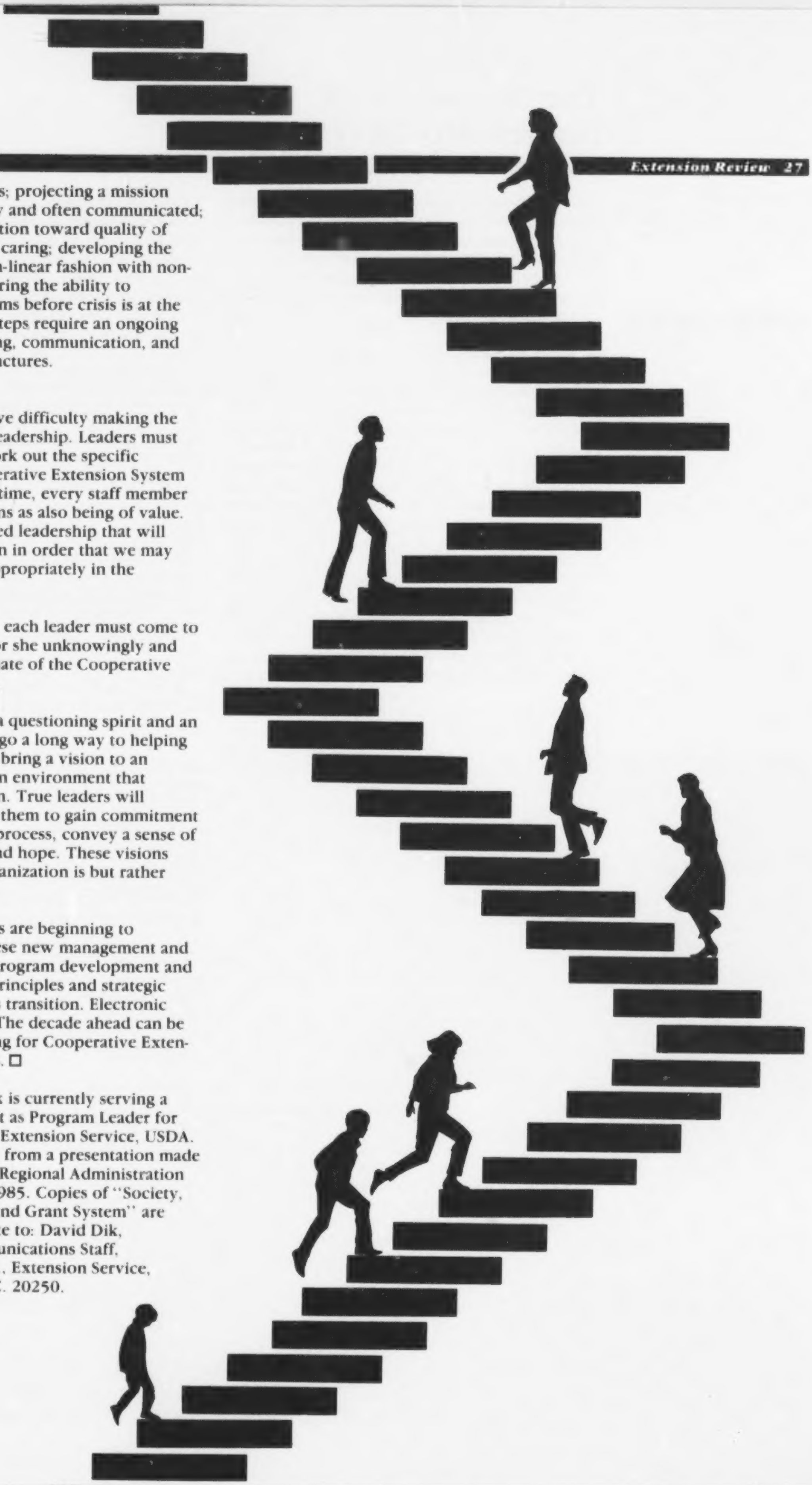
Key Elements

New and innovative leadership styles are necessary to meet new educational opportunities and clientele facing the Cooperative Extension System. Gordon Lippitt offers some sound advice on the subject.

Leadership more in tune with today's organization and staff needs will enhance the organization, according to Lippitt, by: Seeing the organization as a system designed to release human energy rather than control human energy; helping people through leadership to establish individual targets and to achieve them; realizing that organizations, like individuals, pass through levels of maturity, and often maintain the status quo when they should be growing toward mastery of change; and helping the overall organization set targets and objectives particularly as they relate to developing human resources.

Specific actions by Cooperative Extension leaders in response to operating in the socio-technological, multiple revolutions of society could include:

Eliminating maintenance management in favor of leadership with vision; viewing change as inevitable and as a situation filled with *unlimited opportunities* for *positive responses* rather than a threat; fostering an internal organizational environment that encourages creativity and



honest communications; projecting a mission statement that is clearly and often communicated; encouraging an orientation toward quality of programs, service, and caring; developing the ability to think in a non-linear fashion with non-linear skills; and furthering the ability to reconceptualize programs before crisis is at the doorstep. All of these steps require an ongoing commitment to planning, communication, and new organizational structures.

Need To Unlearn

Organizations often have difficulty making the shift to a new type of leadership. Leaders must have the courage to work out the specific intentions of the Cooperative Extension System and allow, at the same time, every staff member to hold his or her visions as also being of value. To move ahead, we need leadership that will demand that we unlearn in order that we may relearn and function appropriately in the Information Age.

To break from the past, each leader must come to the realization that he or she unknowingly and knowingly sets the climate of the Cooperative Extension organization.

Leadership that allows a questioning spirit and an awakened attitude will go a long way to helping the cause. Leaders who bring a vision to an organization establish an environment that underlies creative action. True leaders will empower staff, helping them to gain commitment to a vision, and, in the process, convey a sense of excitement, promise, and hope. These visions define not what the organization is but rather what it seeks to be.

Across the Nation, states are beginning to incorporate some of these new management and leadership trends into program development and evaluation. Marketing principles and strategic planning are part of this transition. Electronic technology is another. The decade ahead can be frustrating or challenging for Cooperative Extension—the choice is ours. ☐

Editor's note: David Dik is currently serving a one-year IPA assignment as Program Leader for Electronic Technology, Extension Service, USDA. This article is excerpted from a presentation made by Dik at the Northeast Regional Administration Workshop in October 1985. Copies of "Society, Technology And The Land Grant System" are available from him; write to: David Dik, Information and Communications Staff, Rm. 3436-S, South Bldg., Extension Service, USDA, Washington, D.C. 20250.

The Dynamics Of Leadership Development

Leslie Johnson
Associate Editor, ANR Information Services, Michigan State University, East Lansing

Individual leadership development is a cornerstone of Michigan's Extension programs. Both formal and informal opportunities for individuals to develop and hone leadership skills are built into 4-H, home economics, agriculture/marketing, and natural resources/public policy programs.

Michigan's commitment to leadership development extends to leaders and potential leaders in a wide range of community groups and organizations. For the past 20 years, a number of leadership development efforts have focused on helping citizens increase their skills and know-how so they can play more active roles in the decisionmaking processes that affect their communities, organizations, professions, and lives.

Premier Program

The premier formal leadership development program began in 1965. It grew out of an awareness of the growing complexity of agriculture in the United States and of the need for farmers and rural leaders to become more knowledgeable about public policy issues.

The Kellogg Farmers' Study Program was developed in the Michigan State University (MSU) Department of Agricultural Economics as a public affairs project of the Cooperative Extension. A 5-year Kellogg Foundation grant provided for three groups of 30 participants each, with each group lasting for 3 years. A second grant in 1968 funded two additional groups and extended the life of the program through 1972.

The program helped participants gain a better understanding of the economic, political, and social framework of American society and apply this understanding to the complex problems and unique concerns of agriculture and rural communities.

The ultimate goal was to develop a nucleus of effective spokespersons for agriculture in Michigan. A secondary aim was to create and test a model leadership development program that could be used to identify and develop potential leaders in other sectors.

The 150 young farmers who took part in the program formed a pool of skilled and committed leaders and advisors for farm organizations, local service groups, government agencies, and rural communities in Michigan and elsewhere.

In-depth Training

The Michigan Agricultural Leadership Program (MALP) succeeded the Kellogg Farmers' Study Program. Initiated in 1981, MALP provides in-depth leadership development experiences to expand the pool of rural persons able to play leadership roles in agriculture and in the rural communities of Michigan.

Both classroom and travel experiences help participants increase their understanding of themselves and others; increase their understanding of the social, economic, and political systems that have an impact on them; and learn how to work with these systems to analyze and solve problems that face agriculture and rural communities.

Men and women, some farmers and some agribusinesspersons, take part in this 2-year program.

Non-Agricultural Groups Included

With the series of New Horizons programs that began in 1969, Extension expanded its leadership devleopment efforts to groups outside agriculture. Between 1969 and 1975, more than 200 men and women in 22 counties took part in programs designed to help them better understand the economic, political, and social framework of their communities; identify and study local issues; and develop communication and problem-solving skills.

New Horizons programs initially ran for 3 years. Relatively high attrition led to a new model—2- and later 1-year programs on a single-county rather than multi-county scope, with local county Extension staff carrying out more of the planning and program coordination.

New Horizons programs eventually evolved into Expanding Horizons. With guidelines from campus specialists in MSU's Department of Resource Development, local county staff members planned and carried out local leadership development programs for selected groups.

Campus support for local program developers and considerable flexibility in program format and content made it possible to tailor programs to the needs of local participants.

Like New Horizons, the Expanding Horizons programs sought to help citizens become better able to take part in community decisionmaking by increasing their knowledge and skills. Participants were generally 25 to 45 years old, had demonstrated some leadership potential, and were interested in improving their communities and willing to get involved.

Localized Programs

Programs were highly localized to meet local situations and participants' needs. In Ionia County, for example, a 2-year program emphasized personal and community change and how such change affects community decisionmaking. Two-year programs in Leelanau and Grand Traverse counties helped young fruit growers improve leadership in that key industry. A 1-year program in Muskegon County aimed at urban, primarily minority group neighborhood leaders emphasized development of individual skills and motivation.

The ultimate goal was to improve management efficiency in community programs. Some 1-year programs targeted special audiences, such as Hispanic community leaders.

Other comprehensive leadership development programs designed to meet the special needs of various groups or industries have served native Americans, women, the tourism industry in northern Michigan, and the forestry industry.

In early 1985 the Leadership Dynamics Program in Forestry began in recognition of the key role of forestry in Michigan's economic recovery and development. Patterned after MALP, the 2½-year program is designed to broaden participants' knowledge of public issues that affect the forestry industry at the local, state, national, and international levels.

The program's goal is to produce industry leaders who see the potential for economic growth, sensible and innovative long-term management, and higher profits for forest industries.

Positive Evaluation

Evaluations of Michigan's programs consistently reveal participants' satisfaction and substantial improvements in self-confidence, skills, knowledge of issues, and ways to participate in decisionmaking on the local, state, and even national levels.

Time after time, participants credit their involvement in Extension leadership development programs as the push they needed to get involved or to expand their role in community affairs and organizations. □

BELTS For Traffic Safety

More people are wearing auto safety belts and using their child passenger seats correctly because of a community educational program called BELTS (Belts Ensure Lifetime Safety) being conducted by National Extension Homemakers Council, Inc. (NEHC). The program is funded by the National Highway Traffic Safety Administration (NHTSA), Department of Transportation.

In early 1985, when an additional grant was funded by NHTSA, NEHC sought proposals from states with a new stipulation that proposals be jointly developed and implemented by a state Extension homemaker safety chair and a state Extension specialist in concert with the governor's highway safety representative.

Nine states were awarded grants with each state to obtain proposals from at least 10 counties. Here again, employing the FCL model, the professional and a volunteer were to serve as co-project directors.

In late 1985, 10 additional projects were funded using the same methodology. This $195,000 three-phase project is resulting in fewer traffic injuries and deaths.

To accomplish this program, NEHC members are developing new leadership skills. They are writing grant proposals, developing project budgets, and serving in new capacities as co-project directors. They are cooperating with new state agencies and involving members at national, state, and county levels in new teaching roles.

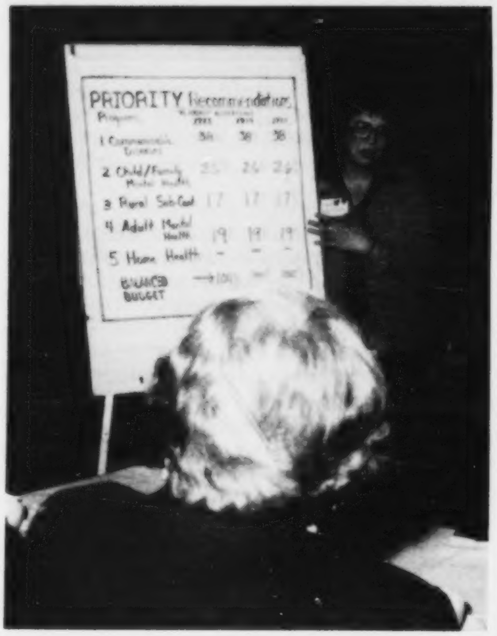
Fayola Muchow, past president of NEHC, Inc. is the BELTS project manager. For more information about the project contact her at the following address:

Fayola Muchow
BELTS Project Manager
Route 4, Box 245
Sioux Falls, SD 57101 □

Jeanne Priester
National Program Leader, Home Economics And Human Nutrition, Extension Service, USDA

FCL—Public Policy Process

Carol J. Culler
Extension FCL Regional Coordinator, Western Rural Development Center, Oregon State University, Corvallis



PROBLEM IS:
POSSIBLE SOLUTIONS

Left: After attending Family Community Regional Training Institute, Gay Fields, shown lecturing, has been elected to the urban and sanitary board in Roseberg, Oregon, and announced her candidacy for county clerk of courts. Right: Marilyn Heth, FCL trainer from Loveland, Colorado, helps a neighborhood group identify and analyze a local problem.

Four years ago, 70 women sat in a small room at the first Family Community Leadership Regional Training Institute. They were there to learn how to resolve community problems through better leadership skills.

Many of them wondered what they would do with this information once they returned home. Some were nervous when they role-played "offering testimony" in favor of a particular cause to a panel of elected officials.

All participants gained new skills and learned new strategies that could assist them in their personal growth and in handling a family or community concern.

Goals Identify Priorities

Family Community Leadership (FCL) is an educational program of the Extension Service and the National Extension Homemakers Council, Inc. with the following goals:

- education to understand the complexities of public issues and how to solve public problems;
- participation in public affairs on family-related issues by women who have learned effective leadership; and
- organization within Extension Services and Extension Homemakers which can support individual public affairs leaders and groups.

The W. K. Kellogg Foundation initially funded the program as a pilot project in six western states—Alaska, Colorado, Hawaii, New Mexico, Oregon, and Washington.

Initiating Change

Since that first institute 4 years ago, many FCL participants have initiated changes in their communities.

One participant in Washingotn, for example, helped formulate an injured workers program. Another participant in Hawaii helped her community raise $60,000 for a community center. And in Alaska an FCL participant struggled to get additional school programs for special education students.

FCL participants are working on concerns such as these which are close to them and important in their communities. Some participants serve on local boards and commissions.

Training Provided

FCL participants attend a Regional or State Training Institute. A balance of ES faculty, Extension Homemakers, and volunteers make up the team. They receive 30 hours of basic instruction in six subject areas:

- Leadership and Communication
- Working with Groups
- Issue Analysis and Resolution
- Community Affairs and Public Policy
- Volunteerism
- Teaching Methods

Participants work together in county or area teams to polish their skills and formulate educational segments that they can offer to other agencies, organizations, and groups in their community.

All FCL trainers sign a contract to pay back a certain number of hours in training or service for the training they receive. Usually that amounts to 2 days per month for a year.

Team Approach Is The Core

The magic of the program is viewed as FCL's unique approach to team work. Volunteers and ES faculty are trained together; they plan programs as peers, and carry out training as co-equals. Trainers are not separated by title, work experience, or degrees.

Everyone brings unique experiences to the program and everyone can find a place to use their talents while increasing their skills in less developed areas. Critical to its success, the team approach used in FCL appears to be making a difference in the enthusiasm and support for the program.

FCL is governed by a board of directors made up of one volunteer and one ES faculty from each of the states; the National Extension Homemakers Council President (Eleanor Whittemore); and the ES/USDA Deputy Administrator in Home Economics and Human Nutrition (Ava Rodgers).

The Regional Board decides on policy and provides general guidelines for the program. Each state also has a policy board made up of a balance of Extension Homemakers, other volunteers, ES faculty, elected officials, and representatives from the business community.

Committees provide an effective way to handle the variety of decisions needed for a diverse program. They also give a large number of FCL trainers the opportunity to gain experience at various management levels.

FCL Expands

The program's success has generated interest in FCL nationwide. The W. K. Kellogg Foundation, realizing the long-term impact of the FCL program, granted funds for the dissemination efforts. Several activities were initiated to expand the program; several more are scheduled.

In the fall of 1985, the National Extension Homemakers Council (NEHC) held Regional Leadership Training (RLT) workshops. Six FCL trainers provided the training at each of these four sessions. The 380 participants consisted of ES faculty and Extension Homemakers who held leadership positions in their states.

Wyoming is the first state beyond the six initial states to establish a state FCL program. Family Resource Management Specialist Michele Merfeld and Extension Director Fee Busby fostered the development of the program.

Kellogg's recent funding of a $296,000 grant will support additional expansion activities. A national meeting is being planned where key people, both ES faculty and volunteers from each state, will meet to discuss the organizational aspects of the project and determine how to begin an FCL program in their state.

Training Resources Available

One goal of FCL was to produce training materials. Materials developed and available for purchase are: (1) a notebook of resource materials used in training sessions and (2) a resource pack of materials from all six states and regional materials in all six curriculum areas.

Also available is an 8-minute slide/tape set which provides an overview of the FCL program.

In 4 years, FCL has provided over 2,110 women and men with intensive training in leadership and group dynamics. Participants have learned the public policy process, how to identify and analyze issues, and strategies for influencing elected officials. They have prepared lessons and taught their skills to others. They have gone into their neighborhoods to analyze problems that concern them.

FCL participants continue to seek new roles and responsibilities in their communities because they are convinced they can make a difference.

For further information about FCL, contact:
Carol J. Culler
FCL Regional Coordinator
Western Rural Development Center
Oregon State University
Corvallis, OR 97331
or phone 503-754-3621. □

Extension Evaluates Leadership Development

John A. Michael
Study Director, NISLDE
Evaluation Specialist
Extension Service,
USDA

Results of an ongoing national impact study on leadership development will enable Extension decisionmakers to set future priorities and to develop more effective programs in this area.

The National Impact Study of Leadership Development in Extension (NISLDE) will also inform policymakers and support-group members about Extension work.

Findings and recommendations from the study will be distributed throughout the Cooperative Extension System in early 1987.

Leadership Development Survey

In February 1986, the study team sent a survey questionnaire to approximately 3,300 Extension personnel across the country asking them to describe their policies and practices regarding leadership development.

Personnel participating in the survey include state Extension directors and 1890 administrators as well as program leaders from all states and territories. In addition, department chairs, state specialists, and both district- and county-level professional personnel representing all major program areas are included in the scientifically designed national sample.

Purpose of NISLDE

The study will probe the following issues:

Intended Outcomes: What kinds of leadership does Extension develop among clientele?

Audiences Reached: Whose leadership skills are developed? How many Extension clientele have their leadership skills developed?

Delivery Methods: What methods does Extension use to develop leadership among clientele? What is the frequency, duration, and periodicity of contact with clientele?

Resources: What support and resources do Extension staff receive for developing leadership among clientele?

Staff: Who develops leadership among clientele? Who doesn't? How does CES staff view the importance of leadership development?

Study Auspices

NISLDE was commissioned by the joint Extension Service, USDA, and ECOP Accountability and Evaluation Council. Extension Service is collaborating with Washington State University (WSU) Cooperative Extension and other Cooperative Extension Services nationwide to conduct the study. John Michael, evaluation specialist at Extension Service, USDA, directs the study. Ivan Lee Weir of Washington State University is the principal investigator. The study team also includes Robert Howell and Chris Paxson of WSU.

Participatory Evaluation Model

NISLDE is unique among the national studies because potential users of the study results are themselves participating in its design and conduct. For example, the 15 members of the National Panel on Leadership Development were asked to act as both study teachers and authors. In 1985, Panel members counseled NISLDE staff on the definition and subtleties of leadership development on an on-going basis. In 1986, they will review the findings, assist in interpreting them and drawing conclusions, and make recommendations for decisionmakers to consider.

In addition, Panel members and study staff will co-author a dissemination and utilization plan. Merl Miller, assistant director of 4-H Youth in Maryland, chairs the Panel.

The study's overall advisory group, known as the Policy Review Committee (PRC), also closely follows developments in the study. Peter J. Horne, director and associate dean of the New Hampshire Cooperative Extension Service, chairs the PRC.

The committee is composed of 13 members who represent all major areas within the Cooperative Extension System. Marriane Houston, a volunteer, chairs the PRC Marketing Subcommittee; and Milo Shult, associate director of Texas Agricultural Extension Service, chairs the PRC Products Subcommittee.

Advice from Extension Service, USDA, is provided by Louise Ashton, a member of the Equal Opportunity Staff, and Ovid Bay, director of the Information and Communications Staff, along with the four national program leaders included in the Panel and PRC, all serving as members of the ES Steering Committee. The four national program leaders are: W. Robert Lovan, National Resources and Rural Development; Jeanne Priester, Home Economics and Human Nutrition; Dave Holder, Agricultural Programs; and Stephen R. Mullen, 4-H-Youth.

Each land-grant institution has appointed a contact person for communications about NISLDE. Contact persons cooperated with WSU staff in compiling names for drawing a nationally representative sample. No small task, this represents another first for a national study.

For additional information on the study, call John Michael on 202-475-4552 or contact him on electronic mail at AGS021.□

Survey For Success

Richard D. Reynnells
Program Leader,
Poultry Science
Extension Service,
USDA
and
Daniel Rahn
Extension News Editor
University of Georgia,
Statesboro

An Extension 1984 consumer opinion survey of the Georgia egg industry revealed more than just how shoppers in the state feel about eggs—it disclosed how important 4-H'ers can be to such efforts.

In the summer and fall of 1984, Extension planners conducted a consumer opinion survey—partly funded by the Georgia Egg Commission—to collect information that would reveal how consumers felt about aspects of quality and merchandising of eggs. This information would assist the Georgia egg industry to appreciate consumers' concerns when they purchase eggs and enable retail workers and members of the poultry industry to merchandise eggs more effectively.

The broad scope of the survey presented a problem: it was likely that many people would not take the time to fill out such a lengthy survey. Would consumers be more patient when questioned by a young and enthusiastic 4-H'er? To find out, 4-H members, county Extension agents, and adult leaders were asked to volunteer to work on this project.

Representative Counties

Extension survey specialists chose 17 counties on the basis of location, population of the county seat, and volunteer assistance by the county Extension agent. Extension tried to achieve a cross-section of population densities through representation of the south, central, and north Georgia Extension districts.

Extension volunteers collected data in 35 stores. In no case were more than four stores chosen per county. The counties ranged from rural counties with county seat populations of about 1,000 to counties in the metro Atlanta area.

The surveys were numbered by stores and color coded by Extension districts. Only a question concerning carton preference required consumer comments. Shoppers filled out 2,975 questionnaires and answered 26 questions in the following categories: purchase preference, merchandising, education, recipes, and egg quality.

Survey Questions

The survey asked eight demographic questions: sex, martial status, number in family, age, education level, race (optional), income (optional) and town/rural. Each question was summarized as a total percentage of responses and statistically analyzed by demographics.

The special report to the Georgia Egg Commission acknowledged each participant. A copy of each publication from this project will be sent to each participant for possible use in record books.

Practice Sessions

Extension agents organized the 4-H'ers and arranged for them to be supervised in each store by an agent, program assistant, or specialist.

There were two to six 4-H'ers per store, ranging from beginners to high school seniors. A practice session helped the sky 4-H'ers overcome some fears, but it took the real thing to build their self-confidence. By the time they made a few contacts, through, even those who were very shy at first were approaching customers like professionals.

Customer Contacts

At each store, the 4-H'ers talked to customers at the place most convenient for the store manager. At a few stores, the 4-H'ers worked outside or near the egg display; at most, however, they worked at the store's entrance. The 4-H'ers themselves, for an important purpose, made most of the customer contacts.

The 4-H'ers had clipboards to provide with the survey so consumers could quickly complete it in the store. But shoppers could complete the survey at home and return it via business reply mail.

All respondents were asked to fill out an address lable, which was sent to the Georgia Egg Commission. The commission then used the label to send a selection of recipes to the customer in appreciation for the provided input.

Conclusions

The three primary conclusions derived from this study are: (1) County Extension staffs and 4-H members are a valuable source of help on this type of project; (2) Consumer education efforts have been successful in some areas, but more work is needed on unit pricing, causes of egg quality variation, and possibly expanding or modifying egg recipe emphasis; and (3) Educational programs are needed for industry and store personnel so they can better understand the importance of maintaining both egg quality and an attractice egg display.

This survey would not have been nearly as successful had it not been for the efforts of county staff and volunteer workers. Co-workers who made important contributions to the survey include C. F. Strong, Jr., Extension Poultry Science Department, and W. A. Thomas, Extension Marketing Department, Cooperative Extension Service, University of Georgia, Athens.

Ordinarily, with the scope of the survey so broad, many people would not have taken the time to participate. But most people found it hard to refuse to help when a young 4-H'er approached them. 4-H'ers proved a vital link in the process with their universal appeal of youthful innocence and enthusiasm. □

Extension And Leadership— How Important Is It?

Ivan Lee Weir
Principal Investigator
National Impact Study of Leadership Development In Extension, Department of Rural Sociology, Washington State University, Pullman

How important is leadership development perceived to be by Extension professionals?

Currently, national studies are not available to describe the degree to which leadership development is an accepted goal of Extension workers.

Definitions of leadership abound. Authors Hemphill and Coons define it as: "the behavior of an individual when he or she is directing the activities of a group toward a shared goal." The National Impact Study of Leadership Development in Extension (NISLDE), sponsored by ES-USDA, considered the definition that leadership is "teaching clientele how to influence the ideas and actions of others." This was shortened for the Extension Goal Study that follows to read: . . . "influence and guidance training."

Recently, investigators from Washington State University conducted a state study to learn what priorities Extension professionals would give to a list of 18 goals.

These goals were developed from documents generated by Extension personnel in all major program areas, as well as from interviews with professionals employed at county and state levels who were with the five major program units of Extension. The resulting 18 goals were alphabetically arranged for a Goal Survey document.

Extension Goal Survey

To discover what priorities Extension professionals would give to each of these goals, investigators sent a questionnaire to all state administrators, specialists, county agents, and staff personnel.

Respondents were questioned concerning their attitudes, jobs, goals, and conditions of employment. Each respondent arranged a list of goals from "most" to "least important" for his or her program area. This rank ordering forced respondents to choose among competing goals—a realistic measurement assumption during this period of declining resources and increased demands on the time and energies of Extension professionals.

Two hundred and forty-nine respondents or 93.6 percent returned the questionnaires. Thirty-one respondents were eliminated either because of incomplete answers or because they worked in staff support positions. Of the 218 persons retained in the analysis, 26 were state-level administrators, 57 were state specialists, 29 were county chairs, and 106 were county agents.

An analysis of program area representation showed 31 professionals in Administration, 91 in Agriculture and Natural Resources, 19 in Community Resource Development, 42 in Home Economics, and 35 in 4-H.

Survey Results

On the average, the total group of Extension professionals ranked "Leadership Development" fourth among the 18 goals. Only "Education," "Excellence," and "Practicality" were given more important rankings by Washington state respondents.

How importantly was "Leadership Development" ranked by members of program units in Extension?

Surprisingly, Extension professionals are largely in agreement about the perceived importance of "Leadership Development" for their program areas. Administrative, Community Resource Development, and Home Economics personnel ranked "Leadership Development" third on the average in their lists of 18 goals; 4-H personnel ranked this goal second; and Agriculture and National Resources personnel gave "Leadership Development" an average ranking of eighth in their list of goals.

These findings are in keeping with a common sense explanation of rankings.

Generally speaking, agriculturalists are less focused in their work on people-involvement and more focused on information transfer, and therefore one would expect other goals such as "Economic Prosperity" and "Productivity" to be ranked higher on their lists. On the other hand, the four other program units in Extension are highly focused on people involvement, and thus it is natural that "Leadership Development" would be perceived as more important for these program areas.

Differences In Rankings

What about differences by employment level, education, years of service, and sex of respondent? Statistical analyses revealed there were no significant differences between the rankings which county agents and state specialists gave "Leadership Development," but administrative personnel gave this goal a significantly more important ranking.

On the other hand, the 12 professionals who held bachelor's as their terminal degrees ranked "Leadership Development" significantly more important than did their more highly educated coworkers.

In addition, persons employed in Extension 12 years or more gave "Leadership Development" a more important ranking, a finding which is directly related to the earlier reported ranking given by administrators. Finally, female employees in Extension gave "Leadership Development" a significantly more important ranking than did their male counterparts.

Conclusion: An Important Goal

Leadership development is an important goal of Cooperative Extension both as an objective to be achieved in the 1980s, and as a perceived goal for each of the program units in Extension. The emphasis given the concept in the national mission statement is supported by the extent to which state Plans of Work showed a substantial time allocation set aside for leadership development work. The survey of Extension professionals in Washington state perceived Leadership Development as an important goal, both for program areas, and among the several groups which characterize the Extension Service. □

Missouri Seminars—Savvy For Job-Seekers

Excerpted from **Exclaimer**, *A publication of the Missouri Cooperative Extension Service*

Sandy Stegall
Extension Communications Officer, University of Missouri, Columbia

A young Missouri farmer is concerned about the depressed agricultural economy and needs another source of income . . .

A teacher who has spent 14 years teaching in international schools is curious about what job opportunities might be available to her . . .

A day care center program director wants a career change . . .

These rural Missourians with varying backgrounds, interests, and skills share one thing in common—they need information and help in their job-seeking efforts.

That help has been given recently through 12 free rural employment seminars held in northern Missouri towns. The seminars are organized and partly funded by the Missouri Cooperative Extension Service, (MCES), a tangible result of a USDA farm crisis grant offered earlier this year to Missouri Cooperative Extension.

Earlier in 1985, the Missouri Cooperative Extension Service received a $97,000 grant from the United States Department of Agriculture for programs dealing with the farm crisis. Tom Henderson, Extension program director, business-industry and

Employment

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HEALTH CARE OPPORTUNITIES

continuing education programs, University of Missouri-Columbia, requested $3,000 to fund employment seminars.

Henderson says the seminars are unique in the state and Nation. "No matter what we do, some people are going to need either alternative income opportunities to help them stay on the farm, or they are going to have to exit agriculture," Henderson says.

Offered To All

The MCES seminars, although targeted to farm families, are open to anyone. To date, seminars have been held in Bethany, Canton, Clinton, Edina, Kahoka, Kirksville, Macon, Mexico, Sedalia, St. Joseph, Unionville, and in the Meramec area. Most of the towns are in northern Missouri where fewer non-farm income opportunities exist and where the need is greatest. About 300 people have attended the seminars.

Participants have ranged from teenagers to grandparents. Educational backgrounds have varied from high school through graduate degrees. All seminars have been offered at no charge to the public. Although the seminars have been tailored to the areas' needs and audiences, the components have remained basically the same.

Counselors from the University of Missouri-Columbia Career Planning and Placement Center (CPPC) offer tips on filling out job applications, resume writing to highlight individual skills, interviewing techniques, and networking. All others who work on the seminars are unpaid volunteers.

Features Local Employers

A popular feature of each seminar is a panel of local employers who present their expectations and suggestions for prospective employees. Personnel directors representing area manufacturers, retailers, hospitals and medical centers, fast food establishments, and others, participate.

Panel members stress the attributes of loyalty to the organization, ability to work with others, neatness in appearance, willingness to be supervised, sales ability, good grammar, appropriate education, and skills among a host of strengths they prefer to see in employees.

Mary Heppner, CPPC counselor, says that although farmers have an incredible variety of skills—everything from mechanics and animal husbandry to computerized record keeping and welding—their personalities may be "out of tune" with what employers expect.

"Farmers like to be independent, to work out of doors and make their own decisions; employers are looking for 'team players' who don't mind being supervised or working in a plant all day," Heppner says.

Question and answer sessions following the panels allow workshop participants to ask some delicate questions and air complaints about employers.

In St. Joseph, participants voiced concerns about employers who do not notify applicants when jobs are filled, restaurants that pay less than minimum wages, and employers who hire two part-time employees rather than one full-time to avoid paying benefits.

Other components of the seminars have included presentations by representatives of the Missouri Division of Employment Security; area vocational schools, colleges and universities; and the Human Development Corporation.

In Kirksville, Kahoka, Unionville, and Macon, Extension specialists held sessions on starting and assisting small businesses.

Joining Forces

In all the seminars, Extension staff members have played a vital role in recruiting participants, obtaining speakers, arranging facilities and being part of the program. The efforts have been very "interdisciplinary," Henderson says, because specialists in business-industry, continuing education, 4-H, housing and interior design, family economics and management, community development, and farm management have joined forces to put the programs together.

Evaluations indicate that participants have come away with valuable insights. One Sedalia registrant said, "I am returning to the workforce after 10 years. The course led me to reassess my skills and to realize the need for a job target."

New employment seminars are planned for other parts of the state. ☐

How Extension Views Leadership Development

M. Chris Paxson
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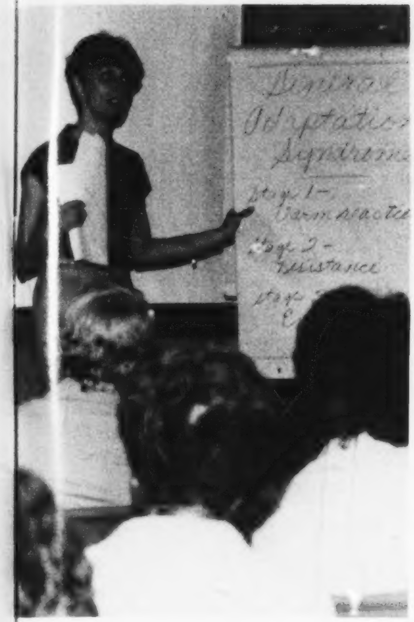
Ivan Lee Weir
Principal Investigator, NISLDE, Department of Rural Sociology, Washington State University, Pullman

Have you ever had difficulty communicating with others about leadership development? If so, you are in good company. Different concepts of the term prevail throughout Extension.

Staff members of the National Impact Study of Leadership Development in Extension (NISLDE) are investigating what Extension workers regard as "leadership development." NISLDE, commissioned by the joint ES-USDA and ECOP Accountability and Evaluation Council, is being conducted by ES-USDA and Extension at Washington State University, in cooperation with Extension nationwide.

NISLDE investigators found a number of different conceptions of leadership development prevailing throughout Cooperative Extension. Differing and sometimes conflicting views about what constitutes leadership development can impair communications internally as well as with Extension sponsors.



Discussions with Extension staff, including agents and specialists, about their work revealed that *their concepts of the term leadership development* were patterned by *who they taught, what they taught, the methods used,* and *the reasons for teaching* specific subject matter.

Clientele and Language
Many Extension personnel teach persons considered to be leaders by virtue of the positions they hold or their reputations. These Extension workers commonly use the phrase "leadership development" to refer to *all* educational work with such clientele regardless of the subject matter being taught. Persons holding this view will often say, "Everything we do in Extension is leadership development . . ."

Findings to date include:

Teaching Industry and Community Leaders—Some Extension clientele hold important positions in industry or the community-at-large. Examples of this clientele are agribusiness executives and newly elected government officials. Investigators found that Extension staff who teach such persons frequently refer to all this work as "leadership development."

Teaching Volunteers—Those persons not on Extension payroll who assume responsible positions in connection with Extension programs are commonly called "volunteer leaders." Often Extension personnel charged with training volunteers will refer to any and all training activities as "leadership development," regardless of the subject matter being taught.

Teaching Potential Leaders—Many Extension personnel develop expertise among clientele in subject matter other than leadership. The objective is to give clientele sufficient command over subject matter that they can become a leader in their chosen field of work or interest. Many Extension workers doing this kind of work regard participants in their Extension educational activities as potential leaders, and they view the work with them as "leadership development."

Emphasis On Content—Some Extension workers place more emphasis on the content of what's taught to clientele than the positions they might hold. They use the term "leadership development" to refer to acquisition of knowledge, skills, attitudes, and values necessary for effective leadership.

To understand what Extension personnel specifically had in mind, many documents bearing the label "leadership development"—such as plans of work and accomplishment reports—were examined. This review produced a lengthy list of leadership skills which were then grouped into categories.

The types of leadership skills identified by this procedure appear in the table on this page along with a few subject matter examples of each type.

One common thread to all the skills listed in the table is that they are taught with the intent that clientele learn *how to influence* the ideas and actions of others. Many Extension workers speak of "empowering" clientele, by which they mean helping clientele learn how to influence others.

Method-Oriented
To some Extension staff, method is of paramount significance. For example, in the minds of some Extension workers instruction had to be formal—through lectures, workshops, or some other didactic means—in order for it to constitute leadership development.

NISLDE discovered that concepts of leadership development held by Exctension staff were patterned by who and what they taught, methodology, and reasons for teaching specific subject matter. Opposite, left: Forum on agricultural leadership convenes at Washington State University (WSU). Opposite, top: Delegate leaders meet at WSU at NAEHC conference. Opposite, below: Young participants in 4-H health education course. Far left: County agents attend seminar dealing with stress at WSU. Middle: Participants at *NAEHC conference form a "break-out" leadership discussion group at WSU. Right: Demon*stration *underway in WSU soil chemistry laboratory.*

Photographs courtesy of Washington State University, College of Agriculture and Home Economics.

Types of Leadership Skills Taught by Extension Personnel and Examples of Each

LEADERSHIP SKILLS	*SUBJECT MATTER EXAMPLES*
Forming and working with groups	recruiting, building teams, identifying responsibilities
Managing meetings	arranging facilities and equipment, building an agenda, using parliamentary procedure
Solving problems	evaluating alternatives, estimating future impacts
Planning for group action	recognizing diverse needs, identifying key decisionmakers, understanding power structures
Mobilizing for group action	developing broad-base support, obtaining commitments to action
Understanding leadership	understanding leadership roles and styles, adapting leadership styles to situations
Developing proficiency in teaching	maintaining learner interest and enthusiasm, managing learning environments
Communicating effectively	understanding communication styles, listening, being assertive, speaking in public
Understanding and developing oneself	identifying and clarifying values, assessing degree of self-confidence
Understanding society	learning about society's institutions, interpreting economic and social data, understanding social problems
Directing projects or activities	setting goals and priorities, managing and allocating human resources, measuring performance
Understanding financial matters	allocating financial resources, budgeting and record keeping, unerstanding financial statements
Understanding social change	understanding change and its effects, understanding how new ideas are adopted

By contrast, content-oriented workers overlook matters of educational practice. In their view, whatever the method, leadership development consists of seeking to enhance clientele know-how in influencing the ideas and actions of others.

Purpose-Centered

Some Extension workers' concept of leadership development centered on purpose. Many persons holding this view thought that both staff and clientele needed to understand explicitly that leadership development was the purpose of the educational activity in order for it to qualify in their minds as leadership development.

Other workers thought leadership development could be done implicitly, as a by-product, while imparting expertise in subject matter other than leadership.

To some, educational efforts constituted leadership development only when *it* was the primary purpose. Others saw themselves as pursuing multiple objectives simultaneously, leadership development among them.

Many Extension workers described their leadership-development work from the point of view of intentions, while a few spoke in terms of results. The latter noted that leadership skills can sometimes be developed unknowingly and unintentionally.

Improving Communication

Because of the varied emphasis on clientele and content, methods and purpose, NISLDE staff members compiled a list of leadership skills developed by Extension workers. The list is presented here to enhance communication about leadership development. □

Borrowers And Lenders—Bridging The Gap

John M. Sperbeck
Extension Communication Specialist, University of Minnesota, St. Paul

Volunteer mediators in training base their role-playing on realistic farm mediation situations. Minnesota Extension has provided nine training sessions throughout the state for 300 volunteer mediators.

Photograph courtesy of Dave Hansen, Extension Communications, University of Minnesota.

A neutral third party hopes to bring together farm lenders and borrowers involved in adverse real estate actions enabling them to make decisions about restructuring debts.

Volunteer mediators involved in Minnesota's farm mediation program and trained by Extension hope to provide an element of fairness during these critical financial meetings.

The program, initiated by Minnesota Governor Rudy Perpich, is a cooperative effort of the Minnesota Departments of Agriculture and Commerce, various Minnesota banking associations, Farm Credit Services, farm organizations, and the Minnesota Extension Service.

During sessions between lenders and borrowers, the volunteer mediators will remain neutral. "They won't make decisions like a judge or referee," says Joyce Walker, an Extension specialist with Minnesota Extension. The mediator's role is to lead and manage the discussion without taking sides and to assure that all points of view are heard. The mediator is responsible for keeping things orderly, fair, and moving forward. The lender and borrower have the responsibility for making financial decisions and plans.

Recruitment And Training

The groups and agencies cooperting in the program recruited the mediators. Minnesota's Departments of Agriculture and Commerce screened the applicants and developed the final list.

In January 1986, Minnesota Extension provided nine training sessions throughout the state. About 300 volunteer mediators participated. Trainers were professional mediators experienced in labor, consumer, and divorce mediation. They were selected and hired by Minnesota's Departments of Agriculture and Commerce and Extension Service.

Extension's Role

Extension agents will not be mediators; however, they will help the farmers prepare a set of alternative farm business plans for the mediation sessions, according to Kathy Mangum, Project Support coordinator for Minnesota Extension. County agents will provide names of three mediators for lenders and borrowers to choose from in individual mediation cases.

The mediation service is confidential, voluntary, and low cost or free because it does not require legal counsel. Information and referrals for the lender-borrower mediation sessions are to be provided through a toll-free Project Support Hotline number.

Mediation Demonstrated

A half-day conference on the program in February 1986 included a demonstration of the mediation process for farm groups, lenders, agencies, educators, news people, and political leaders. Minnesota Extension videotaped the demonstration to use later as a training aid within the state.

For more informtion about the program, contact Kathy Mangum on (612) 373-5168. □

The Right Stuff At The Worksite

Marion Prince
Extension Home Economist, Washtenaw County Extension Office, Ann Arbor, Michigan

A major movement is taking place out there! Whether you call it holistic health, health promotion, or health risk management, it all boils down to one idea, taking personal responsibility for health decisions.

Many businesses are considering ways to promote health for their employees at the worksite. An estimated 50,000 businesses in the United States have implemented some type of health promotion program; untold numbers are providers of such programs.

Some businesses have established their own staffs, facilities, and equipment to carry out health activities. Most, however, hire outside providers to conduct programs.

The Michigan Extension Home Economics program became involved in health promotion programming after the Fitness 7 notebook was issued to each county. Alabama's Extension Service originated the information for the Fitness 7 resources. The seven subjects are nutrition and weight, sleep, stress, exercise, alcohol, tobacco, and the environment.

Washtenaw County Efforts

In Wshtenaw County, Extension Home Economist Marion Prince showed the notebook to staff members at the local Health Department and together they assembled a committee from several county departments. They discussed ways to promote healthful practices among the more than 200 employees at the County Service Center.

The Washtenaw County commissioners encourage county departments to work together and they endorsed the health promotion efforts, later called "The Right Stuff." For several months, they subsidized a free lunch as an incentive to participants.

Initially a survey was delivered to the 16 departments at the Service Center to an identified contact person. The returns from the employees in each of these departments were very useful in planning programs for the coming year.

A kick-off event, an open house with display booths and a free lunch, helped create awareness about the program. It attracted more than 100 employees.

Monthly Sessions

During the first year, programs offered once a month at the lunch hour covered topics including stress, exercise, weight control, and personal safety.

Resource people were drawn from the Parks and Recreation Department, the Sheriff's Department, the Health Department, Mental Health, and Cooperative Extension.

Attendance was about 10 percent of the potential audience and seemed to be independent of whether the lunch was served. The programs were free.

Each month the contact person in each department issued personal printed invitations to every employee. The logo, a hand with the thumbs-up position, was on the cover. The invitation contained a tear-off portion for a personal response.

Program Spin-Offs

One spin-off of the program is a walking club that meets three times a week to walk around the grounds of the Service Center. This is a very useful activity for people with desk jobs that allow little exercise.

The experience with "The Right Stuff" also may have been influential in helping the county Health Department receive a grant from the state of Michigan to do health promotion at the worksite with small businesses and industries. Cooperation continues with several county departments that have resource people to lend to this effort. There will be fees attached to this service because the grant contains a matching monies clause.

Implications For The Future

The results of a recent study by Marion Prince point to an increased concern about the health of employees.

Promoting healthful life choices at the worksite may not be a practical area for Extension efforts in large cities, where sophisticated providers are aggressively marketing their programs. But Extension is well known in small communities for its credible educational offerings.

Extension has skills to offer, contacts in the local communities, and relationships to strengthen with other county departments.

Health promotion at the worksite is a concept whose time has come. As seen in the Washtenaw County Service Center's "The Right Stuff" program, Extension can be instrumental in organizing successful health promotion activities. ☐

Tax Treatment of Timber

Thom J. McEvoy
Extension Forest Management Specialist, School of Natural Resources, University of Vermont, Burlington

To fill a meeting hall with woodland owners any time during the first quarter of the year just conduct a session on tax treatment of income from timber sales.

To estimate the economic impact of taxation workshops on clientele a study was conducted by Extension forest management specialists at the University of Vermont on workshop participants who attended a two-hour session on timber sale contracts and taxation of income from timber sales.

Over the course of five weeks, during the months of January and February, 1985, approximately 130 people attended one of four sessions of the workshop conducted by Extension forest management and replicated around the state.

Workshop Objectives
Objectives of the workshop were to teach woodland owners the fundamentals of contracting with stumpage buyers and others, to introduce important taxation information regarding timber income receipts, and to show how timber sales can be arranged to meet IRS provisions for capital gains.

Three months later, each of the workshop participants was sent a survey with 24 questions to discover the dollar value of the session to each participant.

Thirty-three of the 130 questionnaires received were returned in usable form; this 25 percent response rate to a questionnaire involving personal finances is regarded as a high return rate.

Findings
About 70 percent of the respondents said they had sold timber in 1984 or in earlier years. Almost two-thirds of the respondents said they expect to have a sale in 1985. Of those who had sold timber before the session approximately 40 percent said they treated the income as a long-term capital gain.

Two out of three respondents reported they knew nothing about capital gains before the workshop—*even though about half of them were experienced sellers of Timber.* Almost a quarter of the respondents who had sold timber before the workshop with no knowledge of capital gains, indicated that their tax returns were prepared by an accountant or tax preparer.

Experienced timber sellers were asked about the types of contracts they used. Slightly less than half of the respondents said they used a contract suggested by a forester (almost equally divided between public and private foresters). Only four percent said they used the buyer's contract. *Thirty-five percent of the respondents who had sold timber in the past said they did so without a contract even though three out of four of them said they had worked with a forester before the workshop!*

Consignment Sales
One of the primary themes of the discussion on timber sales was to avoid consignment sales. Two out of three respondents who said they had used this method of sale in the past indicated that they would not use consignment sales in the future.

Although the workshop strongly encouraged the use of foresters in timber sales, the session had little effect on respondents who had not previously worked with one. However, 40 percent of the respondents who had worked with foresters said they would be "extremely important" and 60 percent of this group agreed they would be "slightly important" to the sale.

Cost-Effectiveness
In 1984, 47 percent of the respondents said they sold $73,410 worth of timber. About half of this group, or seven of the owners who said they did not know anything about capital gains before coming to the workshop, sold $30,270 worth of timber. Of these, four said they treated about $27,270 as a long term capital gain.

First, if we assume that the four respondents who knew nothing about capital gains attribute their use of it in 1984 to the workshop, the sessions saved them an amount which is at least equal to the taxes they would have paid on the 60 percent exclusion. Although the respondents were not asked to reveal their tax brackets, $16,000 of income exclusion would result in a $5,000-to-$8,000 tax savings for taxpayers in the 30-to-50 percent tax bracket. If one adds to this the knowledge they gained in cost basis depletion and treatment of expenses of the sale, *then the actual value of the session to these owners is probably much higher.*

Participants were asked how much they believed the workshop saved them. The difference between their estimate of savings and the potential tax value of the income exclusion for those who first learned about capital gains at the workshop (our estimate of savings) is considerable. The same four respondents, mentioned earlier, who knew nothing about capital gains before the workshop but used it after learning the rules at one of our sessions, probably saved more than $5000. Yet, these same individuals estimated that the workshop saved them only $850.

Either the value of knowledge is severely under-estimated by workshop participants or they perceive other factors which cause savings to be more important.

Woodland owner workshop on taxation may be one of the most cost effective forest management subjects. Although the greatest economic impacts may be distributed between relatively few respondents, their sum is nevertheless substantial. □

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extension review

United States Department of Agriculture Summer 1986

Cooperative
Extension
System

Inside...
The Environment

A 43.7:

Introducing Our New Logo

We're proud and pleased to introduce the new logo or symbol for our nationwide network the Cooperative Extension System: a first for our organization since it began in 1914. The logo, a striking graphic triangle, symbolizes the strong, equal partnerships within our system —federal, state and county and Extension, research, and the private sector. The triangle also symbolizes change and knowledge.

The last three pages of this issue include a "Logo Description and Usage Sheet," with examples of how the logo can be used on state materials. □

New Mexico 4-H'ers Gift President Reagan

President Ronald Reagan

President Ronald Reagan test fits his new green corduroy "Honorary 4-H Member" jacket, emblazoned with a 4-H clover emblem, and presented to him by Senator Pete V. Domenici (Republican, New Mexico) on a recent White House visit.

Senator Domenici presented the jacket to the president at the request of the five member New Mexico 4-H delegation who were visiting Washington, D.C. while attending the National 4-H Conference held May 8 and 9 at the National 4-H Center in Chevy Chase, Maryland.

The New Mexico delegates—Lucy Rush, 4-H youth leader, Taos; Kathy Keith, Tucumcari; Melinda McNeill, Bluewater; Patricia Metheny, Albuquerque; and Sarah Sayles, Mesquite—had the president's name embroidered on the jacket in advance of their visit but were unable to see him to personally gift him with it. While visiting Senator Domenici they asked him if he would present it to the president. Shortly after their "4-H Day On The Hill" the 4-H'ers were informed by the senator's office that the president had received the jacket and worn it briefly. The New Mexico 4-H'ers were elated, and so were the other 333 delegates to the National 4-H Conference. □

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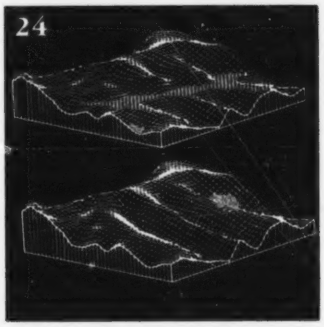

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Fit To Drink

Joe Makuch
Extension Water Quality Specialist
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Groundwater in Pennsylvania is an important natural resource—a resource Pennsylvanians have tapped. They use about three-quarters of a billion gallons of groundwater each day. And almost half of that groundwater is for drinking supplies that demand high-quality, uncontaminated water.

Groundwater Contamination

Sometimes, however, groundwater pumped from wells or drawn from springs is not suitable for human consumption. Naturally occurring substances in the earth, various land use activities, and improper well or spring construction can all cause poor quality water to flow from the household tap. For rural residents with private, individual water systems this may pose a problem.

"People with their own water systems are responsible for ensuring the quality of their water," says Karen Mancl, Extension water specialist, Department of Agricultural Engineering at Penn State University. "And providing safe drinking water for your family can sometimes be a complicated and confusing affair."

Safe Drinking Water Clinics

To help fill the information needs of people with their own water supplies, Extension water quality specialists have been conducting Safe Drinking Water Clinics throughout the state. Initial support for the program was provided in part through Renewable Resource Extension Act funds.

These clinics are run through the county Extension offices and offer several different presentations on water quality topics, one-to-one consultations with Extension water specialists, and an opportunity to purchase (at cost) a *Water Supply Records* book.

"Keeping good records is essential to managing your water supply," explains Bill Sharpe, Extension water resource specialist with the School of Forest Resources and the Institute for Research on Land and Water Resources, Penn State University. "We developed this book as an aid to management. It contains materials on water supply management, but probably more important, its loose-leaf format provides a means for people to file information, such as well logs or water test results, that is specific to their system. Having access to these types of water supply records makes it easier to handle problems that may crop up in the future."

The water clinics also feature displays by water treatment equipment companies and the presence of local water testing laboratories that offer a package of water tests at a reduced rate. These tests are tailored to the particular water quality problems of the county.

Pilot Clinic

In May 1984, the pilot Safe Drinking Water Clinic was held in Indiana County, Pennsylvania. The purpose of the clinic was to provide people with information about water supply management and to encourage them to take action to actively manage their water systems.

Spurred by water quality problems stemming from coal mining and gas drilling, Indiana County agent Ward Stover worked with Extension water specialists to organize the clinic. "I became particularly interested in water quality problems as a result of a county dairy study," says Stover.

"We found that poor quality water was one of several factors hurting milk production. That study got me thinking about the importance of uncontaminated water."

To help put the clinic together, Stover worked with a water program planning committee. "They were a group of citizens interested in helping us develop an education program on water quality," he says. "With their knowledge of county residents' water quality concerns, they were a valuable resource."

Evaluation

Several months after the clinic, Extension staff sent an evaluation questionnaire to each of the 104 participants to assess how well the clinic's objectives were met and to gather information to help plan future clinics.

The questionnaire was designed with assistance from Nancy Ellen Kiernan, program evaluation specialist with the Department of Rural Sociology, Penn State University, to be—in form and content—as unimposing as possible.

The survey was conducted in four stages. In the first stage, all participants were sent the booklet-form questionnaire; an addressed, postage-paid return envelope; and a cover letter asking for participation in the survey. A week later the group received a reminder postcard. This boosted the return rate from 25 percent for the original mailing to 48 percent.

Two weeks after the second mailing, those who hadn't responded were sent another survey and return envelope along with a new cover letter. The response rate increased to 63 percent. Finally, a new reminder postcard was sent and served to make the final response rate 69 percent.

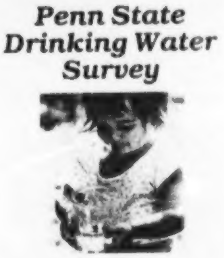
Results

The evaluation survey indicated that the clinic did meet the stated objectives: People received new and useful information. For example, 51 percent of the respondents learned how often to run water tests for bacteria and nitrates. And participants were also prompted to take some management actions: 58 percent had their water tested and 39 percent began organizing their water supply information in one place.

As an added bonus, respondents indicated that as a result of attending the clinic they were able to save, collectively, nearly $500 on their water supply management costs.

The Future

Safe Drinking Water Clinics are continuing to be held throughout the state. And by refining the clinics based on evaluation surveys, Extension is ensuring that rural residents of Pennsylvania get the assistance they need to enjoy the benefits of pure, clean water. □

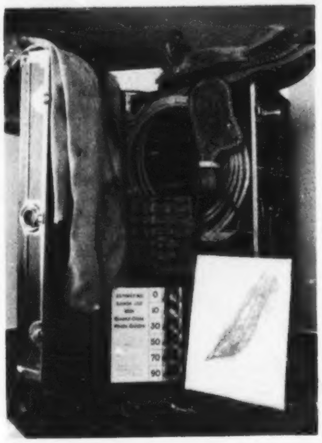


Opposite: Is her glass of water fit to drink? Sometimes water from Pennsylvania's rural springs or wells is unfit for human consumption.

Above: Poster promotes the Safe Drinking Water Clinics being held throughout the state by Extension water quality specialists.

Building The Land Ethic

Don Floyd
Assistant Extension Specialist
Division of Range Resources
School of Renewable Natural Resources
Univesity of Arizona, Tucson



Left: A range travelling trunk serves as a teaching aid for Arizona's elementary school teachers. Extension specialists, funded through the Renewable Resources Extension Act (RREA), use the trunks for classroom programs on Arizona's rangelands. Right: Arizona teachers, attending the fifth annual Natural Resources Workshop for Educators sponsored by Extension, study wildlife in the field.

Two important factors influence Extension rangeland programs in Arizona: Eighty-five percent of land within the state is managed by federal, state, or tribal governments and about 86 percent of all land within the state is rangeland.

From the desert grasslands and saguaro cactus forests along the Mexican border to open pine forests and sagebrush plateaus north of the Grand Canyon, Arizona's citizens rely on rangelands to provide water, forage, recreation, fuelwood, and wildlife.

Cooperative Extension provides the educational materials and technical expertise Arizonans need to make wise decisions about management of public and private rangeland resources.

Arizona's Extension range programs have two major emphases —(1) providing general range educational programs for youth and adults, and (2) providing technical information and assistance in rangeland management.

Reaching New Residents

Arizona's rapid population growth in the last decade means many new residents who are unfamiliar with deserts, mountains, and public lands. One of the challenges facing Extension is finding new ways to reach urban audiences with messages about multiple-use management of public lands.

Through funding made available by the Renewable Resources Extension Act (RREA), Arizona Extension promotes public land stewardship with traveling trunks for classroom programs, television public service announcements, pamphlets on rangeland etiquette, posters stressing the multiple uses of rangelands, and a traveling exhibit.

In 1985, Extension specialists, funded through RREA, provided more than 50 classroom programs on Arizona's rangelands and, in cooperation with the Coconino County Schools and Resource Center for Environmental Education, developed an elementary school curriculum for rangeland education.

Teaching urban adults about public land stewardship and the "land ethic" is an important focus of the RREA project. Last year Extension distributed almost 5,000 copies of a pamphlet on rangeland etiquette to those who hunt, fish, sightsee, and birdwatch. The Arizona Game and Fish Department, Arizona Department of Public Lands, and U.S. Forest Service assisted in this project.

Currently, RREA is attempting to establish a relationship with urban audiences through radio and television.

In 1986, the Extension range program will sponsor the fifth annual Natural Resources Workshop for Educators. This week-long workshop has trained more than 130 Arizona primary and secondary school teachers in the art and science of multiple-use management.

Extension Wildlife and Range Specialist John Stair recently contributed more than 30 educational activities on rangeland wildlife and plants to the ***Arizona Teachers Resource Guide for Environmental Education.*** The guide has been distributed to teachers and youth leaders throughout the state.

Maintaining Strong Relationships

The second component of Arizona's Extension range program maintains the traditional strong relationship with livestock producers and public land managers. Range specialists and county Extension agents are working with livestock producers and public land managers in developing allotment management plans and in establishing joint rangeland monitoring projects to evaluate the effectiveness of management programs on public lands.

Extension is involved in 10 long-term monitoring projects throughout the state in cooperation with ranchers, the Soil Conservation Service, State Land Department, Bureau of Land Management, and the U.S. Forest Service.

Extension Specialist George Ruyle is working closely with the U.S. Fish and Wildlife Service in developing cooperative management plans for the recently acquired Buenos Aires Ranch, which provides critical habitat for the masked bobwhite quail, an endangered subspecies.

ARIZONA'S RANGELANDS
ARIZONA'S RANGELANDS
ARIZONA'S RANGELANDS
LAND PEOPLE HERITAGE

Left: Posters emphasize the multiple uses of rangelands as part of Arizona's RREA project. Right: Two Arizona teachers closely examine the soil at the Natural Resources Workshop for Educators.

Ruyle also arranges and coordinates workshops for livestock producers and agency personnel on increasingly important public land policy subjects such as cooperative management, land-use planning requirements, and rangeland monitoring methods.

In cooperation with the U.S. Forest Service, a rancher cooperator, and the Department of Animal Science at the University of Arizona, range management research and Extension faculty are active in a research and demonstration grazing study at the Santa Rita Experimental Range, south of Tucson. This project, under the supervision of Extension Specialist Phil Ogden, is designed to develop effective grazing systems on Lehman lovegrass pastures for cattle.

By maintaining strong programs for traditional Extension clientele and developing new methods and programs for urban youth and adult audiences through RREA, Arizona's Extension rangeland program is building a land ethic which helps Arizona citizens face the issues of changing demands for public and private rangeland products, rapid growth, and resource management. ☐

Cleanup Time For Lake Okeechobee

Charles T. Woods
Extension Associate
Editor
Institute of Food and Agricultural Sciences
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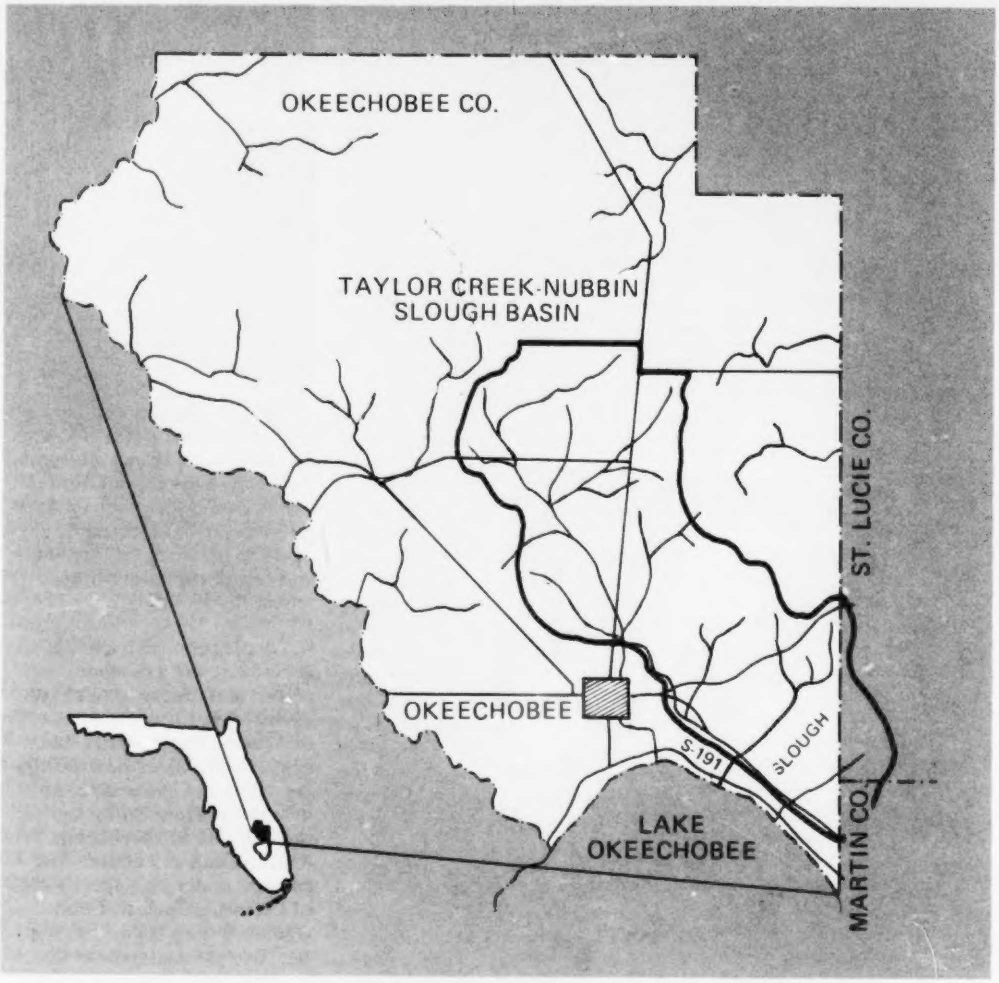


Most of the 108,000-acre Taylor Creek-Nubbin Slough Basin—containing about 53,000 cattle—is located in Okeechobee County. An experimental clean water project at the basin has as its goal a 50 percent reduction in phosphorus and nitrogen entering Lake Okeechobee, a main water source.

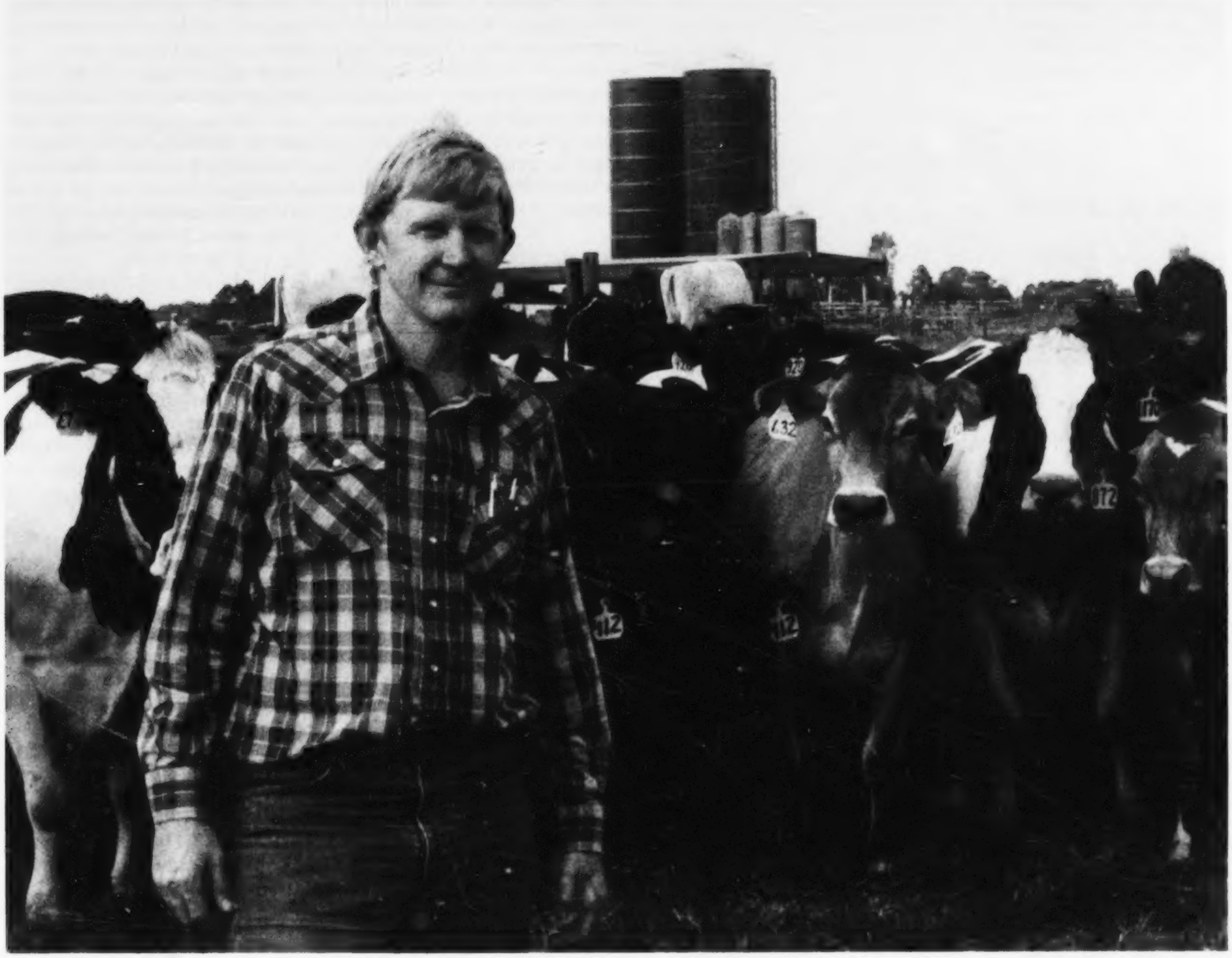
In Okeechobee County, Florida, where cattle outnumber people by more than four to one—93,000 cows to 22,000 people—animal waste is contributing to the decline of water quality in Lake Okeechobee, Florida's largest fresh water lake.

While past efforts to contain waste in lagoons have not been entirely successful, farmers now believe a new cleanup and recycling program will help keep waste nutrients out of the lake and on the farm where they can be utilized on pastures.

Earlier this year, the Taylor Creek/Nubbin Slough Rural Clean Water Project Field Day, sponsored by Extension at the Institute of Food and Agricultural Sciences (IFAS) provided Okeechobee farmers with an opportunity to see different waste management systems in operation. Lake Okeechobee is the main water source for five cities around the lake and it's a secondary source for much of the lower east coast of Florida. "It's also an important recreational and commercial fishery resource," says Barry Baldwin, Extension agricultural engineer with the University of Florida's Institute of Food and Agricultural Sciences (IFAS).

Studies by the South Florida Water Management District (SFWMD) have shown that concentrations of phosphorus and nitrogen—the most troublesome components in animal waste—are major contributors to the degraded water quality of the lake.

"Because of the vast potential for damage from animal waste, it is important to develop agricultural best management practices (BMPs) that will help control nutrient runoff to the lake and retard the process of eutrophication. Eutrophication is a natural aging process of a lake induced by inputs of nutrients by man or by natural decomposition," Baldwin explains.



Bob Rydzewski, manager of the Roger Melear farm, a 1,350-acre dairy spread located in the Nubbin Slough Basin, is a firm believer in the new waste nutrient irrigation system designed to return waste nutrients to the pasture. Other Okeechobee dairies are participating in this cost sharing program.

Runoff Problems

Many types of runoff are contributing to the eutrophication of the lake. Runoff from the Taylor Creek/Nubbin Slough Basin, which accounts for only 4 percent of the total flow into the lake, contributes 30 percent of the total phosphorus and a significant amount of the lake's nitrogen loadings, according to Vickie Hoge, IFAS Extension Agent in Okeechobee County.

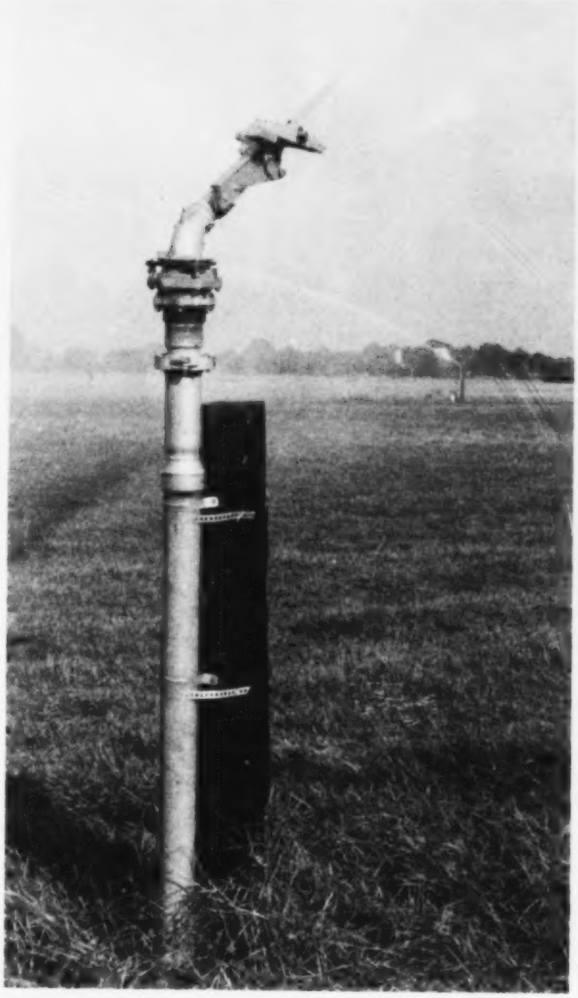
Moreover, Hoge adds: "A major portion of these nutrients have been attributed to dairy operations where animals have been permitted to wade freely in streams and other bodies of water to relieve heat stress that limits milk production." The basin includes 108,000 acres with 24 dairies containing 28,000 cows as well as 56 cattle ranches containing 25,000 beef cattle.

Following the passage of the Rural Clean Water Program by Congress in 1979, 13 experimental clean water projects were initiated across the nation. The $1.3-million Taylor Creek/Nubbin Slough Basin project is one of them, providing financial incentives to farmers to install BMPs to reduce nutrients entering the lake. Goal of the project is a 50-percent reduction in the amount of phosphorus and nitrogen entering the lake through the S-191 control structure operated by SFWMD on the north shore of the lake.

BMPs In Action

The overall project is administered by the USDA's Soil Conservation Service (SCS) and the Agricultural Stablilization and Conservation Service (ASCS), which signs cost-sharing contracts with farmers for installation of various BMPs. In addition, SFWMD and IFAS are responsible for water quality monitoring and educational programs associated with the project.

Hoge says all dairies in the Taylor Creek/Nubbin Slough Basin are now under contract to begin installing BMPs, and it is expected that 89 percent of all farms will be participating in the program by July 1986.



One of 52 sprinklers at the Melear farm being used for irrigation. Part of the cost of this IFAS demonstration project is funded by the federal Rural Clean Water Program.

Recommended BMPs include (1)stream protection by fencing cattle away from waterways, (2) shifting cattle from pasture to pasture to reduce concentrations of wastes, (3) collection of wastes from holding areas around barns for recycling on pastures, and (4) collection of barn wash in lagoons or reservoirs for recycling on pastures.

New Irrigation System

The 1,350-acre Roger Melear Farm was the first of many large dairies in the basin to begin using a new sprinkler irrigation system designed to return to the pasture phosphorus, nitrogen, and other waste nutrients collected at primary and secondary lagoons.

Bob Rydzewski, manager of the farm, reports that 1,100 cows are milked daily at his farm. Manure from the milking barn is flushed into a 7-acre reservoir where solids are allowed to settle. A 50-horsepower electric pump delivers the nutrient-rich waste water from the reservoir to the pasture through a 6-inch pipe. Four-inch pipes then connect 52 irrigation sprinklers permanently installed on an 80-acre pasture. Two sprinklers can be operated at the same time, covering about 1 acre with effluent.

The system, including reservoir construction, cost about $45,000, with 75 percent of the total being paid by the ASCS under the federal Rural Clean Water Program.

Participating Dairies

Other Okeechobee County dairies are participating in the cost-sharing program. One dairy has installed a large center pivot irrigation system that can spread waste effluent over a 200-acre hayfield. Another dairy using a large traveling gun system while a third is using waste effluent to fertilize ornamentals in its diversified operation.

"Prior to this, animal waste was just a nuisance. Now we have an opportunity to capture valuable nutrients—especially nitrogen, phosphorus, and potassium—and return them to the soil, completing the natural cycle," Rydzewski says.

"Instead of feeding green chop and hay, we're producing haylage—a stored forage from wilted grass silage—in our new oxygen-limiting silo," he points out. "We're hopeful haylage will be the high-quality forage we need to produce milk economically. Of course, we're saving on fertilizer costs by recycling our waste nutrients for crop production."

Sampling Nutrient Levels

To measure nutrient levels in the effluent at the Roger Melear Farm, Barry Baldwin and Roger Nordstedt, both associate professors in the IFAS Agricultural Engineering Department, Gainesville, are analyzing samples taken at random locations in the irrigated pasture.

Data indicates nitrogen levels in the effluent are 16 to 22 pounds per acre inch. Based on these measurements, Baldwin says application of around 25 inches of effluent per year should provide an excellent nitrogen supply for forage crops.

"This project demonstrates how animal wastes can be utilized," Baldwin concludes, "to protect the environment and improve economic returns for Florida's livestock industries." □

CTIC—Conservation Educator

G. Morgan Powell
Extension Liaison,
National Association of Conservation Districts
Conservation Tillage Information Center
Fort Wayne, Indiana

Conservation tillage, and especially no-till, is a complicated farming technique. Producers who have successfully switched to this new technology have combined several components through a sound management plan. They use chemicals precisely, often with contingent plans, monitor pest and disease possibilities, plan machinery needs, perform soil tests, evaluate the situation, and revise the plan as needed. Farmers often use the time saved from not tilling to manage the farm business.

Conservation education programs, such as those of Extension, combined with the appropriate disciplines, help bring together the essential components for successful conservation tillage systems.

Because conservation tillage is complex, more can be accomplished when all interested parties work together. One such example is that of the Conservation Tillage Information Center.

A Focus For Cooperation

The Conservation Tillage Information Center (CTIC) began in January 1983 as a cooperative project among agribusiness, private organizations, and government agencies. Its purpose is to gather and share information that will encourage the adoption and effective use of conservation tillage on our nation's croplands. CTIC is supported by government agencies through their staff contributions, by agribusinesses and foundations, and from sale of CTIC products. It is a nonprofit organization sponsored by the National Association of Conservation Districts (NACD) as a special project. CTIC has helped focus national attention and awareness on the role of conservation tillage in soil and water conservation.

Cooperation With CTIC

USDA-Extension Service's liaison to CTIC coordinates Extension involvement and activities. Three people have served as liaison: James Morrison, Extension agronomist, Purdue University; James Bauder, Extension agronomist, Montana State University; and G. Morgan Powell, Extension agricultural engineer, Kansas State University.

Additionally, many state and area specialists and county agents support CTIC through their contributions as resource specialists and as contributors to the annual acreage survey.

Extension personnel helped formulate the plans and objectives of CTIC. CTIC works with Extension and other organizations, particularly USDA's Soil Conservation Service, to advance the practice of conservation tillage.

For example, Soil Conservation Service staff member Bruce Julian has been assigned to the CTIC Ft. Wayne office since it began. Other SCS employees contribute to the acreage survey and as resource specialists.

CTIC Supports Conservation Education

CTIC staff support Extension education efforts by performing tasks which Extension could not do. The annual acreage survey, for example, is the best information available on the rate of adoption of conservation tillage.

The survey contains details of conservation tillage adoption that are available to virtually everyone. Extension uses the survey in education programs and in program and accomplishment reports. CTIC also has compiled a reference file of Extension publications on conservation tillage and water quality. References complete with abstracts and sources are sent to those who seek information on specific subjects. CTIC's resource specialist file is a valuable tool for referring people with questions back to their local area. (Extension specialists are often the most frequently listed in this file.)

Adopting Conservation Tillage

The CTIC has helped focus national attention on the role of conservation tillage in soil and water conservation. With CTIC's help, substantial progress has been made nationwide toward the goal of encouraging adoption of conservation tillage.

The 1985 National Survey of Conservation Tillage Practices shows about 31 percent conservation tillage and 5 percent no-till. Comparing these numbers with the projected adoption curve for conservation tillage made in 1975 by USDA shows that conservation tillage is about "on target." However, for no-till, the projection showed about 10 percent for 1985 so adoption lags the projection by about 5 years.

Conservation tillage offers a practical and workable solution to an often-asked question—how can erosion be controlled without prohibitive costs to the producer? Many feel it is the best hope to substantially reduce nonpoint source pollution from agricultural cropland in the short term. However, conservation tillage represents one part of an integrated conservation system which also includes conservation structures, contour farming, crop sequences, and maintenance. A well-planned integrated conservation system lets the farmer control soil erosion and most associated pollutants. □

Broiler Waste Goes To Work

J. Ross Harris, Jr.
Extension
Environmental Quality
Specialist
Environmental Control
Department
University of
Delaware, Dover

In the early 1980s, research cast a revealing spotlight on nitrate contamination of groundwater. Agriculture, one of the major sources of this contamination, was contributing through overuse of fertilizer and improper storage and use of manures—particularly broiler manure. Delaware poultry growers produced 204 million broilers generating 228,000 tons of manure.

Delaware's broiler industry is located in a coastal plain which has a high water table and relatively sandy soils. Its water-bearing stratum is a major source of the state's drinking water.

Until Extension involvement in the early 1980s, the land was used as a disposal site for manure, with fertilizer being used as the nutrient source for crops. Extension developed a nutrient management program to focus on the problem of manure mismanagement. The management program, called MANURE (for Managing Agricultural Nutrients Utilizing Resources Effectively), began by emphasizing that broiler manure was a fertilizer and that through proper use and storage the nitrate inputs in groundwater could be substantially reduced. Also, such usage would reduce the need for commercial fertilizers; proper management could protect the environment as well as the farmer's pocketbook.

Management Program

The program consisted of analyzing the manure to determine the fertilizer value, calibrating the manure spreaders, and answering questions relating to manure management on crops in the field.

Traditionally, manure was stockpiled outdoors and exposed to the elements for up to 10 months. This practice wasted valuable nutrients and made the site useless for cropping for at least 2 or 3 years because of excess salts.

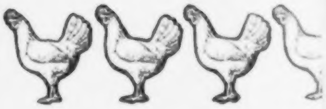
By developing an inexpensive and simple manure storage practice, farmers were able to eliminate these problems. The recommended method involved covering the stockpiled waste with polyethylene tarp anchored with old tires. The plastic keeps the manure dry and prevents runoff and leaching of nitrogen and other nutrients.

Because broiler manure is highly absorbent, covering it also reduces handling costs and equipment wear.

Substantial Reductions

To put these findings into action on the farm, in 1984 Extension specialists began a cost share program for farmers as an educational tool. The program allows farmers to receive assistance through the Agricultural Stabilization and Conservation Service for the cost of the plastic tarps and for nutrient analyses of the manure.

Participants in the program work with the Extension Service on soil testing, calibrating manure spreaders, and developing an entire nutrient management plan for the farm. Most farms participating in the program substantially reduced net fertilizer costs per acre, without sacrificing yields.



Opposite: J. Ross Harris, Jr., Extension environmental quality specialist, (left) discusses reduced fertilizer costs with Roland Hill, a grain farmer who is obtaining a savings by using broiler manure as a fertilizer source on his corn acreage. The tarp-covered manure pile behind them, a storage practice developed by Extension, keeps the manure dry and prevents runoff and the leaching of nitrogen and other nutrients. Above: Hill and Harris use a calibrating manure spreader on Hill's 60-acres of corn.

During 1984, 15 operations actively participated in the manure storage program. In addition, another 40 farms annually participated in managing the broiler manure as fertilizer.

A Fair Savings

In 1980, a grain farmer, Roland Hill, began using poultry manure from his son's broiler operation. Unfamiliar with the nutrient content of manure, he spread it on corn along with commercial fertilizer and watched the crop burn up in mid-August.

The next year a management plan was developed that reduced fertilizer costs by $40 per acre. Without any commercial fertilizer he still realized a 95-bushel-per-acre yield on dry land corn in a dry year.

"On 60 acres of corn, that's a fair savings! At the price grain is now, we'd be going in the red every year if we had to put on all commercial fertilizer," Hill states.

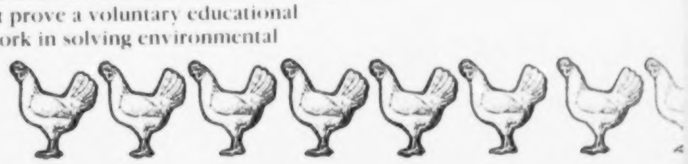
In 1984, Hill no-tilled his corn with poultry manure and obtained 140 bushels dry weight per acre dry land corn. He used no starter fertilizer, but otherwise followed the standard no-till production recommendation of the Delaware Extension Service.

A Popular Source

Each year increasing numbers of farmers are turning to broiler manure as a partial or complete source of fertilizer. Broiler manure is becoming harder to obtain, thus emphasizing the change that has occurred in the thinking on its use.

Because of this change, less manure is being lost to the environment and improved profitability has also resulted for some Delaware farmers.

Two of the farmers in the program have been awarded the State of Delaware's Environment Award for outstanding achievement and progress in solving environmental pollution problems and improving the overall environment. It is farmers like these that prove a voluntary educational system can work in solving environmental problems. ☐



Coastal Erosion: Battle For The Great Lakes

Stephen R. Stewart
District Extension Sea Grant Agent
Michigan State University, East Lansing

For beach dwellers, erosion is more than a natural element of coastal dynamics. Erosion can become the destroyer of homes, the taker of land, and the catalyst that can turn dreams into nightmares.

In Michigan, half of all counties are coastal. The Great Lakes dominate many aspects of the lives of those who live there.

The District Extension Sea Grant agents of the Michigan Cooperative Extension Service have acted to provide information to Michigan's coastal residents who face critical questions concerning erosion. The principal challenge in terms of educational methodology, however, has been that only five field staff are available to cover the 3,200 miles of Michigan coast.

Extension faced the problem of how to provide individual attention to many shoreline property owners in a time-effective manner. In the past, meetings which focused on erosion and its control were always well attended, but the depth of subject matter coverage within this context was too limited to enable the questions of individuals to be answered adequately.

Because of the large number of coastal residents, individual site visits were simply not practical. And the use of written reference materials alone helped to familiarize people with the basic concepts, but again did little to answer personal questions.

Last summer, to assist shoreline property owners in selecting appropriate control management approaches, Michigan Extension began using a specially developed computer model and follow-up workshops.

Opposite: Destructive erosion caused by abnormal water levels on Lake Huron created this stairwell to nowhere near Port Huron, Michigan. District Extension Sea Grant agents are acting to provide accurate information to coastal residents who constantly face unpredictable weather patterns. Above: The waters of Lake Michigan rose to undercut a stable bluff and home near St. Joseph, Michigan. Ten homes in this area were either destroyed or removed.

The Computer Model

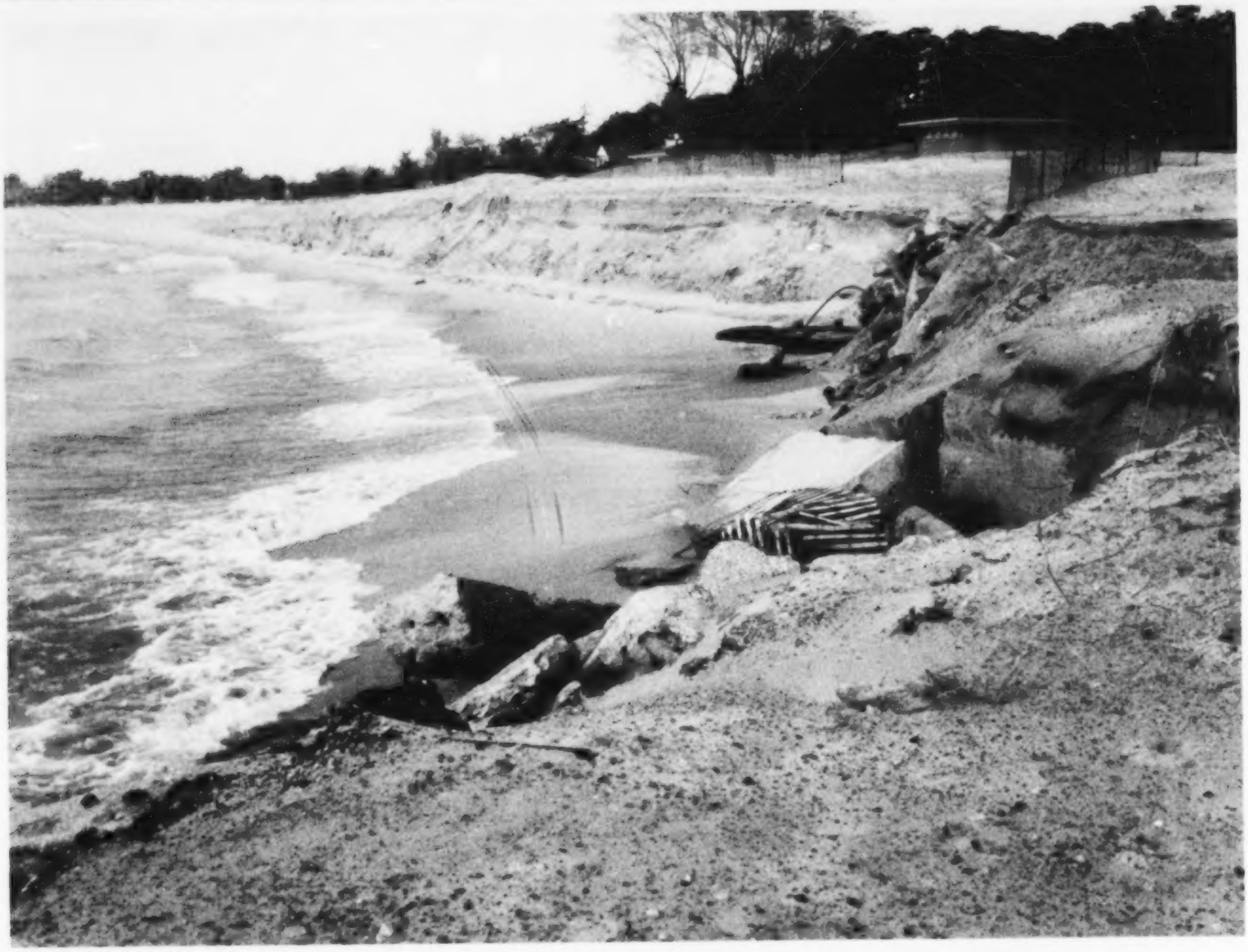
Work began on the computer model in 1984. By fall, the initial version was ready for review and field testing by District Extension Sea Grant agents in different parts of the state. Results of these preliminary applications, along with comments from university and agency experts, led to a working version that was ready to put an extensive test during the summer of 1985.

The model, which requires information from individual property owners, was based on the analysis of site-specific property characteristics, as well as financial and property-use considerations.

One coastal county along southern Lake Huron was selected to be the focus of the 1985 project, based on its number of residents in identified "high risk erosion areas,"—those areas exhibiting an average annual erosion rate of at least one foot per year.

The District Extension Sea Grant agent for southeast Michigan worked with 418 property owners, together representing some $20 million in real estate, through a series of contacts which would provide answers to many of the questions that faced them regarding erosion management.

Coastal residents participating in the project completed individual input sheets and returned them to the district Extension office, where the analyses were run. They each received a personalized printout accompanied by information which helped in understanding the analysis. The analysis showed which generic approaches to erosion management were most appropriate and what the likely costs would be on an annual basis.



Fierce Lake Michigan wave action undermined these sand dunes and beaches at South Muskegon, Michigan. To help break up the wave action, boulders have been placed at several locations.

Photographs on pages 14, 15, and 16 courtesy of the Soil Conservation Service.

Workshops Provided

The computer analyses represented a first step toward answering the questions of shoreline residents. To provide a more indepth understanding of coastal erosion, the computer analysis results, and the various options which might be selected, a series of workshops was offered to those who had received printouts.

Portable computers available at the workshops enabled participants to see how variations in input resulted in different erosion management options. Brief reviews of the processes of erosion and the various general methods available for erosion management were provided as well.

Finally, each participant received a printout of the composite "average" respondent, showing how each property varies and that none can safely be termed typical without making significant assumptions.

Participation in the workshops was less than had been anticipated, with slightly less than 14 percent of those participating in the computer analysis phase of the project also taking part in one of the workshops.

A follow-up survey of those not participating showed, however, that nearly 25 percent did not participate because the analysis printout had answered their questions adequately by itself, while more than 46 percent did not feel they faced significant erosion problems. It is not clear whether or not this last perception was based on the fact that ownership would be transferred before the eventual loss of their home.

Top Left: This seawall and shoreline protection scheme shields the shores along southern Lake Huron. Above: Timber seawall created to preserve a bay in northern Lake Michigan. Timber is cheaper than concrete but has a shorter functional life in the coastal environment. Below: A District Extension Sea Grant agent works with a student aide to input data on the computer as part of the 1985 Erosion Management Project. Every Great Lakes shoreline resident who participated in the Project received a printout analysis.

Future Efforts

The problem of coastal erosion has not gone away since last summer. In fact, the water levels of the Great Lakes have rarely been higher than those predicted for 1986, which means severe erosion for many property owners and communities.

The 1985 summer project was just a beginning. In 1986, a follow-up survey of 1985 participants will be completed to examine how decisions were influenced by these efforts. In addition, more than twice the number of coastal residents participating in the 1985 project will be involved in a similar effort in other areas of the state.

The potential economic benefit of these efforts is enormous; the very lives of some coastal communities may be at stake. It is crucial that Extension continues to act as an educational resource for coastal residents so they may better understand and deal with the continuing challenges that confront them as they inhabit earth's most dynamic environment. □

Terraces—Key To Kansas Soil Conservation

William S. Sullins
Extension
Communications
Specialist
Kansas State
University, Manhattan

G. Morgan Powell (left), Extension agricultural engineer, and NACD liaison at the Conservation Tillage Information Center, checks the effectiveness of terrace maintenance practices at a Kansas farm. Terraces that are well maintained reduce the risk of erosion damage.

To keep topsoil from ending up in ditches, streams, and reservoirs, agricultural producers have relied on terraces since the disastrous consequences of erosion a half century ago. Grass waterways, underground outlets, and similar structures assure an orderly outlet for runoff collected in terraces.

If laid end to end, the terraces built in Kansas alone would extend about 360,000 miles, equal to the distance from the earth to the moon and half-way back. The acreage of grass waterways in Kansas equal an area one-third the size of Rhode Island. Estimates for replacing these Kansas soil/water structures at today's prices approach $1 billion; the cost to replace all of the nation's conservation structures might be incalculable.

"Maintenance of conservation structures is the crying need of the day on America's farms," says G. Morgan Powell, Extension agricultural engineer, and NACD liaison at the Conservation Tillage Information Center, Fort Wayne, Indiana. "Much like an old abandoned barn, conservation structures deteriorate and lose their effectiveness."

"Our conservation structures on agricultural land not only reduce erosion," Powell points out, "but also save moisture, often a production limiting factor."

Without terraces and outlets, farm production on erosion-susceptible sloping land, Powell says, would have a destructive effect on the soil resource. "After a time," he says, "the supply of food in this country would not be so abundant or so reasonably priced."

Terrace systems do need attention and maintenance to protect the investment in them.

Well-maintained terraces reduce risk from erosion damage resulting from overflow. They also encourage contour farming which saves power and water and reduces erosion.

Joint Effort

For the past 9 years, Extension at Kansas State University, in cooperation with the Soil Conservation Service (SCS), local conservation districts, and Kansas land improvement contractors, have worked to teach landowners soil and water conservation principles. This instruction includes structure maintenance and repair of terraces.

The strategy, initiated in 1978, involves terrace maintenance demonstrations on farmer-owned land in cooperation with Extension county agents, USDA personnel, and others. Robert A. Bohannon, currently national program leader for soils, ES-USDA, served as Extension soil and water conservation specialist at Kansas State University, and joined Powell to add the grass waterway management component to the on-farm demonstrations.

"Those producers who recognized that a farm without good topsoil was much less productive," Powell comments, "were glad to see us because they knew this situation was unprofitable and made their land less valuable."

Farmers Motivated

Most farmers believe terrace and waterway repairs are the type of farmwork that is easily put off.

"The demonstrations changed attitudes," Powell says. "Farmers seemed to welcome the motivation they received. They were shown the benefits of good system management and related practices, including conservation tillage."

Conservation tillage has been viewed as the most cost-effective erosion control practice used by farmers, especially for sheet erosion. However, on sloping land structures are also essential to control concentrated water flows that cause rill and gully erosion. Conservation tillage, while a key to effective erosion control, simply is not adequate on slopes without structures.

Where no tillage is used, Powell reminds farmers, those erosion depressions from concentrated flow remain year after year.

Terraces and other structures for controlling rills and gullies are essential to a complete conservation system.

"We have demonstrated that terraces and accompanying outlets are our most effective method of controlling concentrated flow erosion," says Powell. "In dry areas, level terraces provide an extra benefit of improved water management which boosts crop yields."

Conservation structures once consisted of contour terraces that curved with each undulation in topography. Farmers gradually switched to parallel terraces for improved "farmability." Today, radically different systems that run parallel to boundaries or other physical land features are gaining in popularity. These newer systems substantially improve farming with large equipment.

Where old terraces do not accommodate large equipment and higher field speeds, emphasis on maintenance is not justified. Powell tells farmers that "outdated systems are simply unacceptable today."

At the demonstrations, landowners learn they are doing a good job of maintenance when a system's capacity can carry a "once-in-10-years storm." Maintenance is usually adequate for gradient terraces when the ridge height above the channel is at least a foot.

For level terraces that must hold all runoff Powell suggests two feet.

Many Maintenance Methods

The moldboard plow is still the most common maintenance tool used by Kansas farmers. However, many tools can be used, including: the one-way front dozer blade, the three-point blade, the wheeled blade, the whirlwind terracer and belt terracer, scraper, motor patrol, and grader.

Left: Powell and local Kansas farmers observe terrace maintenance operations. Terraces are vital to maintain precious topsoil, conserve moisture, and maintain land values. Above: Plow employs three-point blade for terrace maintenance.

Powell sees a pressing need for staff of conservation districts, Extension, SCS, and ASCS to work together to maintain public interest in conservation structures as an integral part of a complete conservation system. "We owe it to our present cooperators and to the next generation," Powell says, "to hold the soil in place—without it the value of land is not much to talk about." ☐

Focus On Alabama Forestry

Vicky Potter
Extension Technical Writer
Information Services
Auburn University, Alabama

With 21.7 million acres of commercial forestland—65 percent of Alabama's 33 million acres—it's natural that forestry should be that state's largest manufacturing industry. Forestry and related industries contribute more than $2 billion to Alabama's economy each year. In addition, 74 percent of the state's forestland is owned by more than 200,000 nonindustrial, private landowners.

"Many people don't realize how important timber is to Alabama's economy," says Bill McKee, Extension forest economist at Auburn University. He points out that, according to figures compiled in 1982, about 50,000 Alabamians work in the timber industry with 14 percent of all manufacturing employment in the state—or one job out of every seven—in wood-based plants. The pulp and paper sector of the timber industry employed almost half of the total timber workers, with approximately $841 million in annual payrolls stemming from timber-based economic activities.

"Alabama's forests are currently growing slightly more timber than is being cut. However, more than one-half of the acres harvested annually aren't being regenerated, and natural stands are only producing fiber at one-third to one-half of their potential," McKee explains.

"That's real cause for concern. Increasing the productivity of the state's forests and encouraging landowners to regenerate timber stands is important if the state is to continue to have a healthy, growing timber industry," says McKee.

"It is natural that Extension focuses a lot of its attention on helping these private landowners."

Regenerating Forests

"Increasing the productivity of Alabama's forests is one of our main concerns right now," says Larkin Wade, head of Extension's natural resources division. Wade agrees with McKee that more than one-half of the acres harvested annually aren't being regenerated.

Extension, Wade points out, has a variety of publications, workshops, demonstrations, and other educational programs each year to encourage landowners to improve management of their timberland.

"In 1984, for example, with the help of other agencies, we encouraged 2,014 landowners to improve 162,422 acres of forestland. This will increase their income by about $77 million over the next 35 years," Wade says. "Evaluation of Extension program efforts in this area show that landowners will receive about $7 in benefits for every dollar spent."

The county Forestry Planning Committees have played an important role in reaching the state's landowners, according to Wade. These voluntary committees stem from cooperative efforts among federal, state, and county agencies and industry.

Reforestation efforts got a big boost in 1982 when Alabama River Woodlands, Inc., gave Extension a grant to hire a multi-county Extension forestry agent to serve in Clarke, Conecuh, Monroe, and Wilcox counties. This agent has focused on regeneration of lands owned by small, private, nonindustrial woodland owners, says Wade.

Christmas Tree Industry

He explains that Extension also had a major influence in starting the growing of Christmas trees in the state. "In 1975 there were only 12 Christmas tree growers in Alabama—today there are at least 300. The Christmas tree industry accounts for an income of $5 million to $7 million annually."

"Reforestation is currently a major emphasis of the county forestry planning committees. More than 18,000 acres were reforested through a 10-county pilot project in 1984–85. Because of the project's success, an additional 10 counties are being added this year." Wade says. ☐

Conservation Tillage—How Linkages Increase Adoption

James Bauder
Extension Soil Scientist
Montana State University, Bozeman
and
Fred Swader
National Program Leader, Water Resources
Extension Service, USDA

January on a Nebraska farm: standing corn stalks catch and hold the moisture from snow. This conservation tillage system reduces soil and moisture loss. Extension has been active in developing educational materials about soil conservation measures while maintaining effective linkages with the Soil Conservation Service and the Agricultural Stabilization and Conservation Service.

Conservation tillage has been widely recognized over the years, but its value has recently become clearly understood, and it is now becoming an accepted farming practice.

Many government agencies have been involved with soil conservation. The Cooperative Extension System (CES), responsible for educational programs, has been active in developing educational materials to deliver soil conservation information to America's land users. The Agricultural Stabilization and Conservation Service (ASCS) has provided financial assistance. The Soil Conservation Service (SCS) has provided technical assistance and has assisted with public education. As we celebrate the 50-year anniversary of the SCS, these agencies continue to play important roles in soil and water conservation.

A local government agency has also been working to promote soil and water conservation—the Soil and Water Conservation District. Over, 3,300 of these independent, farmer-landowner-run districts exist throughout the United States. These grassroots efforts have effectively promoted "on-the-ground" conservation practices, including conservation tillage.

Need For Effective Linkages

The complexity of conservation tillage has raised many questions about its application over the last 40 years. However, farmers experience and research results now clearly indicate that both the economics of farming and the conservation of soil and water encourage the use of conservation tillage in many situations.

Conservation tillage can often provide a cost-effective means of conserving soil and water. There has been a real need for coordinated efforts to inform the public about conservation tillage. But coordinated efforts require linkages. There were no effective linkages to provide such coordinated approaches.

However, leadership by the National Association of Conservation Districts (NACD) with cooperation from many agencies, including Extension Service, has changed this situation.

Information Center Formed

The NACD and its member districts have responded to the need for making more information available about conservation tillage, and the need to focus specific attention on conservation tillage. In 1983, this resulted in the formation, by the NACD, of the Conservation Tillage Information Center (CTIC).

The CTIC collects, identifies, and disseminates information about conservation tillage and has proven to be an effective linkage among private organizations and federal agencies. That linkage has permeated the entire agricultural community. As a result, working relationships and information transfer among local conservation districts, county agents, and SCS field staff are much more effective now than they have been in the past. CTIC provided the linkage; the driving mechanism has been conservation tillage.

Information Network

The CTIC, located in Fort Wayne, Indiana, represents a classic example of linkage between local, state, and federal organizations for the benefit of a single cause. Early in 1982, the NACD and a number of industry representatives met to consider organizing a network that would provide for rapid transmission of information about conservation tillage.

Following discussions among representatives of several federal agencies, an Executive Board was created to help develop a charter and to identify goals. Its primary purpose is to locate information, key resource specialists, and statistics relative to conservation tillage, and assist in the dissemination of that information. Such a Center can increase the effectiveness of involved agencies in providing information, education, and technical assistance.

Cooperative Extension and land-grant university personnel are often hesitant to become actively involved in programs and activities that appear to be strongly influenced by industry groups. Conservation tillage is a farm practice that transcends the boundaries of both agencies and private groups.

Resource Directory

A primary objective of the CTIC was to identify key resource individuals with expertise in various areas relating to conservation tillage. Many Extension specialists and researchers within the various land grant universities possess expertise in specific areas relating to conservation tillage. However, these individuals are not the primary deliverers of information. Many field staff and industry personnel have frequent opportunities to provide up-to-date information to farmers. But such field staff seldom had direct access to Extension specialists or land grant university researchers.

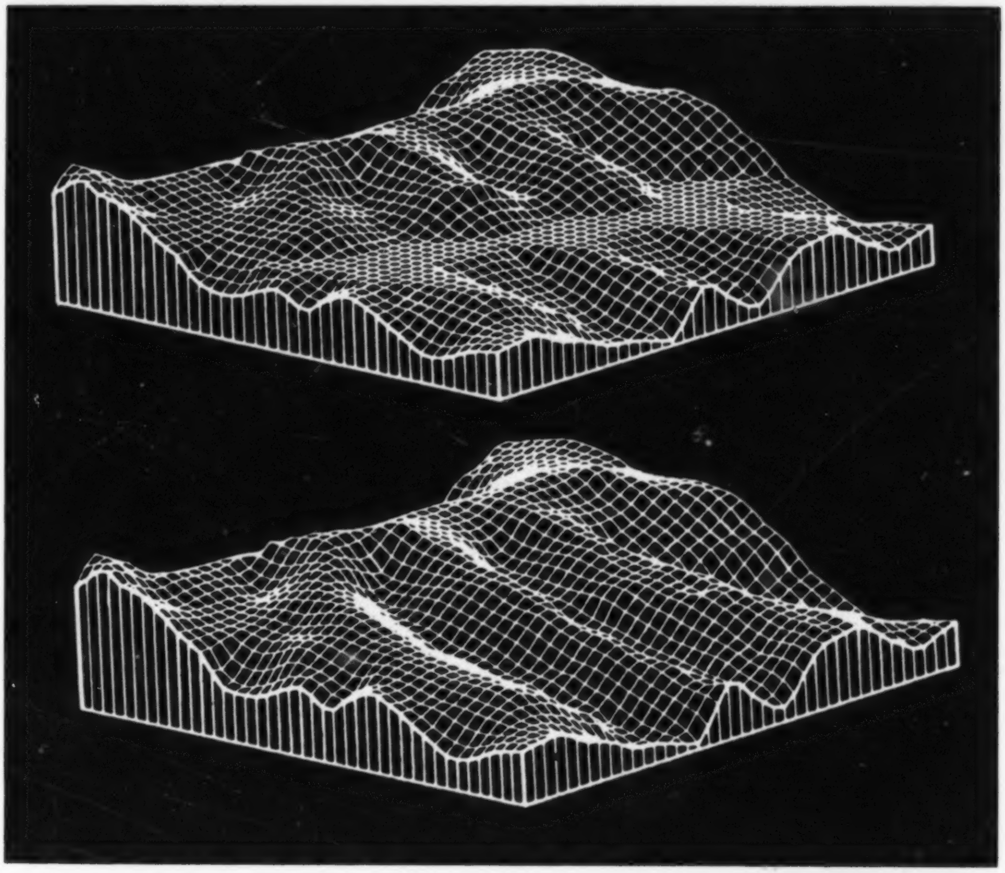
The CTIC's task was to identify such resource people and integrate them into the network of information delivery. To do so, the CTIC created a directory of conservation tillage specialists, from within the ranks of USDA, Cooperative Extension, Agricultural Experiment Stations, private industry, and other agencies, including the EPA. The resource directory helps expand the efforts of such individuals.

The CTIC also developed a library of abstracts of publications about conservation tillage. The library presently contains abstracts of more than 700 publications.

As the Cooperative Extension System continues to perform its role of information development and delivery, such linkages will play an increasingly valuable role in providing assistance. The CTIC facilitates information transfer between agencies and industry, demonstrating the benefits of such linkages. □

Moving Mountains In Coal Country

Sherrie R. Whaley
Extension Information Officer
Virginia Tech, Blacksburg



Top: An isometric representation of pre-mining (below) and post-mining (above) topography on southwestern Virginia's Amos Ridge. The aim of an experimental plan now being tested in this area is to backfill and revegetate all highwalls, and construct nearly level areas where mining has left steep slopes.
Below: Reconstruction of surface mined sites is not always successful. On this backfill in southwest Virginia vegetation has receeded from the reconstructed areas.

Lee Daniels and his research colleages are literally moving the mountains of southwest Virginia. Daniels, a Virginia Tech agronomy instructor, is helping to perfect a technique that could ultimately change the face of Appalachia's coal-producing regions.

Since 1977, federal law has required surface mine operators to restore the land to approximate original contour (commonly referred to as "AOC") after mining operations are completed. AOC requires mine operators to backfill or place the rock spoil generated in mining up against the exposed face of the rock known as the highwall. "In regions where steep slopes abound, such as southwest Virginia," Daniels points out, "the practice may lead to increased erosion and decreased land-use value."

Research in Appalachia's hard-rock regions was meager until Daniels began studying AOC backfills and their problems in 1983. "With detailed on-site work," Daniels says, "we hoped to find out why the failures occurred and if these backfills would be stable over the long haul."

Through Virginia Tech's Extension and research arms, dozens of innovative research activities have focused on mining and reclamation technology, post-mining use of reclaimed land, water quality and supply, and environmental and economic factors.

Left: Lee Daniels, Virginia Tech agronomy instructor, discusses AOC ("approximate original contour") failures with a visitor on Powell River Project Field Day. The Project, located in Wise County, Virginia, is focused on improving post-mining operations in the state's seven coal-producing counties.

Research Project

In 1980, a partnership between Extension, research, and education resulted in the Powell River Project, a comprehensive technology transfer project initiated at Virginia Tech. The Project, headquartered in Wise County, is aimed at improving the future well-being of Virginia's seven coal-producing counties.

"The project has been called one of the most ideal land-grant programs because of its three-way partnership," says H. John Gerken Jr., Extension specialist and project coordinator. The coal industry, federal and state agencies, and local citizens also are heavily involved in the project, contributing more than $1 million and the use of more than 10,000 acres.

Examining Sites

With Powell River Project support, Daniels, Research Associate Jay Bell, and doctoral student Carl Zipper, have spent the past 3 years studying AOC problems in the coalfields. "We surveyed over 30 sites, both failing and non-failing, to learn what the major weaknesses in the AOC technique were," Daniels explains.

They discovered three characteristic weaknesses. The fills were often too steep, or weakened by water seepage, or incorrectly constructed by the placement of spoil material beyond the front edge of "the bench"—a flat area left after the coal has been removed. "No one had put these things up before, so a lot of variability was to be expected," Daniels says.

The intent of the federal provision was good, Daniels stressed. Tremendous environmental degradation had resulted from surface mining, much of it due to improper mining techniques.

"The mining industry really had no economic motivation to do a better job until the 1977 law was enacted. With it came some fairly strict economic and environmental standards," Daniels explains.

As a result of the law, coal operators are required to post bond before beginning work on a mining site. After the mining operation is completed, the site must remain stable and well-vegetated for 5 years before the bond is released. If failures occur within the bond period, the company must return to the site and repair the fill.

Ensuring Stable Fills

"We're compiling guidelines for coal operators that, if used uniformly, would ensure stable fills," Daniels comments.
The Virginia Tech researchers also verified a computer modeling technique that can predict where failures might occur.
"We're real happy with the program" says Daniels. "With the correct data, operators or engineers should be able to use these models effectively."

In addition to searching for the best way to construct AOC backfields in various typography, the researchers are also looking for alternatives to the current method. "We want to keep the fills stable and cover up most of the vertical highwall. The object is to reach approximate original contours," he notes.

Constructing AOC backfields on certain steep slopes is practically impossible. Native slopes in southwest Virginia commonly range from 25 to 33 degrees. Restoring mined land to original contour under these conditions is difficult for the miner and can have severe environmental consequences if landslides occur.

New Mining Practice

One promising alternative is a mining plan currently being tested on Wise County's Amos Ridge. There, Daniels is working with Andy Hall, a contract miner and owner/operator of Amos Ridge Coal Company, on an experimental practice—the only one of its kind in the country.

Under a variance from the Office of Surface Mining, Hall is taking the rock spoil down into the mountain hollows, backfilling and revegetating all highwalls, and constructing nearly level areas where steep slopes stood before mining.

"In addition to meeting environmental performance standards, we are drastically increasing the land-use potential in a region where flat land is at a premium," notes Daniels. "The fills are also being constructed with gentler outslopes so that failure is virtually impossible—a comforting thought to operators."

If adopted, these alternatives could ultimately make surface mining a safer, cheaper, and more environmentally sound method of coal removal, Daniels believes. ☐

Michigan Protects Against NPS

Peggy Kemp
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Information Services
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With help from Michigan State University's Cooperative Extension Service, Michigan, the state that's surrounded by the greatest concentration of fresh water in the world is taking steps to protect its water from nonpoint source pollution (NPS).

NPS is often invisible, frequently ignored, and can have a devastating effect on groundwater quality. Unlike other, more readily identifiable forms of pollution, NPS is conveyed to surface and groundwater through natural processes, such as storm runoff or groundwater seepage. It can be controlled through changes in land management practices.

Agencies Alert Citizens

Under Extension's lead, the importance of making such changes are coming to the attention of Michigan's citizens—urban and rural—through the efforts of a number of agencies.

Among them are the Michigan Departments of Agriculture, Natural Resources and Public Health, the USDA Agricultural Stabilization and Conservation Service, the USDA Soil Conservation Service, and the Agricultural Experiment Station of Michigan State University.

Working together, these agencies developed a plan to curb nonpoint source pollution. At the forefront of this effort is Michigan's Extension Service.

"Extension is a natural network to convey educational information and materials to the public on this issue," says Adger Carroll, assistant director of Extension for natural resources and public policy.

Educational Efforts

"Maintaining and improving the quality of Michigan's abundant water resources can best be accomplished through educational efforts aimed at prevention of NPS pollution;" Carroll says.

To this end, Extension has mobilized the research and educational resources of Michigan State to produce a wide variety of educational materials. Extension specialists and agents produced a new series of Extension bulletins on topics related to animal wastes, crop and soil management, and non-agricultural uses.

Cooperative Extension Service Programs for Improved Water Quality in Michigan

Through print and broadcast media, citizens are learning what nonpoint source pollution is and what they can do to prevent it.

Extension agents in Michigan's 83 counties have been able to take advantage of special training offered at campus-based in-service sessions and seminars held throughout the state.

Through this new series of bulletins, workshops, and the outreach efforts of specially trained agents, Extension is reaching those who are affected by the problem of NPS as well as those who can remedy it.

Targeting Information

Specific information is targeted to the needs of cash-crop farmers and feedlot managers, backyard gardeners, fruit and vegetable growers, septic tank users, lake-front property owners, and public officials.

"Treatments used to deal with the highly visible, readily identified sources of pollution are not effective on nonpoint sources," Carroll says. "Nonpoint source pollution does respond to improved land use and management though, and these changes can be accomplished through education.

In the area of crop and soil management, educational efforts are aimed at preventing soil erosion and runoff that carries nutrients—principally nitrogen and phosphorus—and organic compounds—such as those found in pesticides—from crop land to water supplies. Much of this can be prevented through reduced tillage methods, proper pesticide disposal, and efficient irrigation.

Animal wastes generated from feedlots and large livestock operations can be at the root of both runoff and leaching problems of surface and groundwater. Animal waste pollution causes eutrophication of inland lakes, as well as leaching high concentrations of nitrate nitrogen into underground water.

About 15 percent of Michigan's toxic waste comes from homes and small businesses. Primary sources of nonpoint source pollution are construction sites, lawn and garden chemicals, stormwater runoff, underground storage tanks, improper waste handling and disposal, and misuse of household chemicals and petroleum products.

Michigan Extension has taken the lead in providing educational resources to meet the diverse problems of unique audiences. Through one-to-one contacts, bulletins, media stories, workshops, and consultation, Michigan's citizens are learning more about a critical problem—and how to deal with it. □

4-H And Wildlife—A Tennessee Recipe

James L. Byford
Professor and Acting Department Head
Extension Wildlife Specialist
Department of Forestry, Wildlife and Fisheries
University of Tennessee, Knoxville

RECIPE: 1 young inquisitive mind
1 or more wildlife information sources
and motivation and leadership

Throw in a dash of leadership training, mix thoroughly, then age for a few years. Result? A citizen who is knowledgeable and, most likely, concerned about our wildlife resources.

Early in the history of 4-H, Extension recognized that wildlife should be one of the project areas taught to youth. Back in 1930, Indiana was among the first to include wildlife as a project area. In 1972, the 4-H Wildlife Project began in Tennessee.

Sponsored and encouraged by the Tennessee Wildlife Resources Agency, the project now has 30,867 members, the largest state enrollment of any similar project in the Nation. In 1976, the then 24,000 plus members were recognized with the Youth Conservationist-Of-The-Year Award for their contribution to wildlife.

Tennessee's Wildlife Project includes a core project and three main satellite activities—the State 4-H Wildlife Conference, the State 4-H Wildlife Judging Contest, and the State 4-H FACE for Wildlife Contest.

Core Project

At age 10, 4-H'ers begin to read Extension wildlife literature designed to introduce them to the many areas of wildlife study.

Once the 4-H'er picks a topic of interest, he or she studies it for a year, using literature furnished by Tennessee Extension, as well as other agencies. An activity is usually carried out and records are kept.

The 4-H'er then prepares a demonstration to show and tell others what he or she learned that year. These demonstrations and project records are judged at the county, district, and state levels.

4-H Wildlife Conference

The top two junior high winners in each county receive scholarships to the annual State 4-H Wildlife Conference. During the past 13 years, over 2,500 young people have trained at this week-long leadership conference. Instructors are professional wildlife biologists who represent several agencies.

The conference includes formal classes in game management, fish management, reptiles, amphibians, wildlife ecology, taxidermy, predation, hunting safety, and wildlife management methods.

Participants take a comprehensive exam at the end of the week on the material covered; scores average in the low 70's each year. These scores usually reflect an over 50-percent increase in knowledge from scores of a pre-test given before the conference.

4-H FACE For Wildlife Contest

Contests have long been a tradition in 4-H. Competition, awards, and recognition help provide incentives for what otherwise would be hard work and study. With this philosophy in mind Extension began the Tennessee 4-H FACE for Wildlife Contest. FACE stands for *food and cover establishment*.

To begin the contest, the Tennessee Wildlife Resources Agency provides each participant a free bag of seed. The 4-H'er plants the seed in one wildlife plot and keeps accurate records. All plots and records are then judged by the county 4-H Extension agent and the county wildlife officer. Winning county plots are judged at the regional and state levels. Winners at all levels receive awards—up to the top state award of $300 plus a trophy.

The Tennessee contest has grown to include approximately 1,000 4-H'ers each year.

4-H Wildlife Judging Contest

The 4-H Wildlife Judging Contest originated in Tennessee in 1977. The contest involves training 4-H'ers to evaluate fish and wildlife habitat, determine how well it suits the needs of fish and wildlife, and recommend ways it can be improved for various species of fish and wildlife.

Awards presented are plaques, medals, and T-shirts printed with the words "4-H Wildlife Judging." The state winning team receives an out-of-state wildlife educational trip.

In 1985, a $13,500 grant from the U.S. Fish and Wildlife Service sponsored a regional workshop. Specialists from all the southern states were introduced to the concept of fish and wildlife habitat judging. Since the workshop, every state has indicated plans to conduct this activity. A regional contest is planned for 1987.

Program's Success

A few years ago, as a member of the National 4-H Natural Resources Committee, the author surveyed alumni of 4-H natural resource projects nationwide to evaluate the success of the educational program. Of those responding to the survey, 58 percent indicated that gaining an awareness, appreciation, and understanding of natural resources was a main benefit of their 4-H training.

Teaching 4-H'ers is one of the best ways to instill in the American public an awareness that our natural resources are critical to our survival. There's no doubt about it, 4-H and wildlife—together they're a natural recipe. ☐

Reclaiming A Wasteland For Crops

Charles T. Woods
Extension Associate
Editor
Institute of Food and Agricultural Sciences
University of Florida, Gainesville

"When the phosphate industry begins to wind down in Polk County by the end of the century —ending more than 100 years of mining in the 'Bone Valley'—the annual economic loss in the county will top $1 billion!

"Gone will be some 12,000 jobs, millions in tax revenues and the economic spinoff of a once-thriving industry. About the only thing left will be some 200,000 acres of scarred land that former Governor Askew called a moonscape!

"That's a worst-case scenario for the southwest part of the county if we did nothing to reclaim or rejuvenate these mined lands, which is basically what we've done in the past," says Polk County Commissioner Ernie Caldwell, who wants to turn mined "wastelands" into productive farming areas.

"We're talking about filling a big void in our local economy," Caldwell explains. "Prior to mining, the land has an assessed value of $5,000 per acre. After mining, it has a tax value of $100 per acre. That's a tremendous loss in value, not to mention employment and other business activity generated by the phosphate industry."

"Of course, it won't happen overnight, but ore will be depleted within 15 years and the industry will move on into Hardee, DeSoto, and Manatee counties," he says. "If we can shift citrus and other agricultural operations to reclaimed phosphate land in southwest Polk County, we can create new jobs and a tax base."

Caldwell points out that if 100,000 acres of mined land is eventually used for producing high-value crops, an estimated 14,000 new jobs will be supported and tax revenues will increase from $1.20 per acre to about $40 per acre or a gain of $3,880,000 per year.

Demonstration Project

To demonstrate that citrus and other crops can be grown commercially on these unstable soils, Caldwell proposed a large-scale research project at a 1983 Extension Advisory Council Meeting. Three years later, funding has been received to begin the Polk County Mined Lands. Agricultural

Research/Demonstration Project, a cooperative effort involving the Polk County Board of Commissioners, the Florida Institute of Phosphate Research (FIPR), and the University of Florida's Institute of Food and Agricultural Sciences (IFAS).

First year of the project is being supported by a $750,000 grant from FIPR, a state agency whose funds come from a severance tax on phosphate ore. Additional funds and other support from Polk County and IFAS will bring the first year total to $1.5 million. The project will be conducted on 229 acres of mined land being leased from Agrico Mining Company, Mulberry, and International Minerals and Chemical Corporation in Bartow, Florida.

To Share Results

Research results will benefit not only Polk County, but also will be shared with adjoining counties having mined lands. Total phosphate mining acreage in Florida is about 500,000 acres.

Caldwell believes some of the mined lands will be valuable industrial sites because transportation and other infrastructure are already in place. Others will be developed because they are in the path of urban growth.

But, the vast majority of mined land cannot be developed because of remote locations or structurally unstable soils, particularly the phosphatic clays.

Until now, he points out, the phosphatic clays or clay settling areas (also known as "slimes") which cover 60 percent of the mined areas, have been "virtually useless."

A Pioneer Effort

James A. Stricker, IFAS Polk County Extension director and director of the project, says this research/demonstration effort is unlike anything ever attempted in the past. A 1-year startup and 10-year research program is proposed.

"We need to develop a whole new data base or set of cultural practices for this type of soil," Stricker explains. "This, in turn, will attract the private investment needed to produce crops on reclaimed land."

The agronomic advantages of phosphatic clay soils outweigh the disadvantages, he says. The research program initially will concentrate on vegetable crops and grain crops. Work with ornamental crops and turf is expected to begin the third year of the period. Citrus also will be a potential crop for reclaimed lands.

Opposite: Aerial view of a typical phosphate mining operation in Polk County, Florida. A demonstration project is underway to turn mined "wastelands" like this into productive farming areas. At right: Polk County Commissioner Ernie Caldwell (left) and Extension Director Jim Stricker, director of the research/demonstration project, inspect a mined site. Behind them is a low ground pressure vehicle used to reclaim clay settling areas.

Extension Know-How Required

The project will require the expertise of many IFAS research and Extension faculty. Vegetable crops specialists will study such things as cropping sequences, planting techniques, pest control, and harvesting. Agricultural engineers will look at drainage, tillage methods, and machinery modification.

Soil scientists will work on soil modification to improve fertility and trafficability. Agricultural economists will measure market timing and other economic factors associated with production of reclaimed land.

Stricker says that some of the vegetable crops that might be grown include sweet corn, snap beans, southern peas, broccoli, cauliflower, pepper, and leafy greens. Possible grain crops are field corn, grain sorghum, rice, wheat, and soybeans.

Industry Helping

The phosphate industry has been an active participant in the project, according to John Tallant, former land manager with Estech, Inc., a Bartow-based phosphate mining company.

"For the better part of a decade, a number of us felt like the proverbial voice in the wilderness in promoting the use of these lands after mining. It has been very gratifying to participate in the planning for this project because it offers a potential far beyond what any one company could undertake," Tallant says. "If you consider the large-scale displacement of agriculture that is occurring as a result of urbanization in Florida, it makes a lot of sense to use these lands instead of going to more marginal natural sites." □

4-H Sticks Its Neck Out

Robert Norris
Area Extension
Specialist, 4-H
and
David Torell
Area Extension
Specialist, Livestock
and
Amanda Penn
Dunkerly
Extension
Communications
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University of Nevada,
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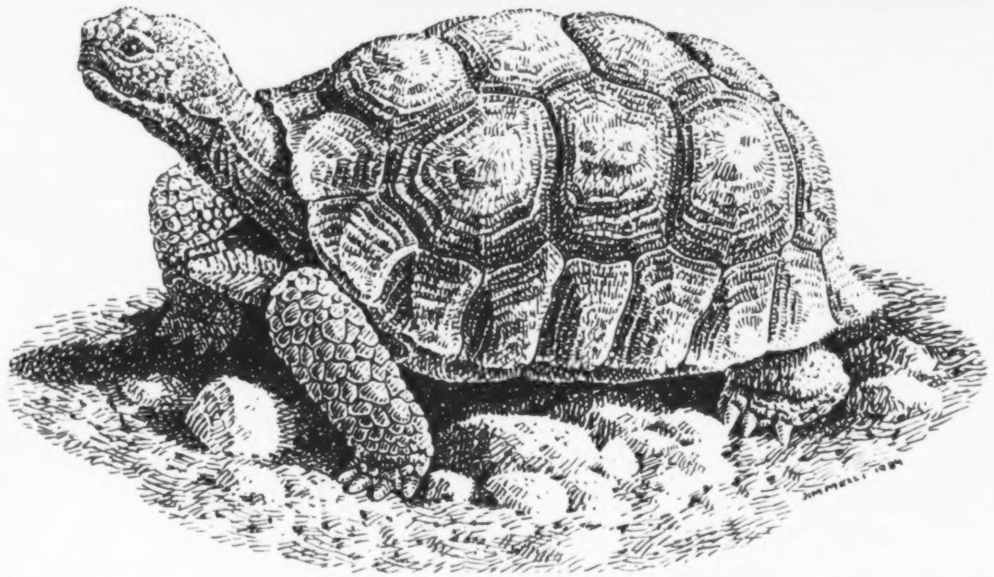


Did you know you should never tether a tortoise? Many 5th and 6th graders in Las Vegas, Nevada, know it, thanks to a new 4-H environmental education program.

The Desert Tortoise Program in Southern Nevada teaches youngsters about the tortoise's environment and life cycle, but, most importantly, the program stresses how fragile this Mojave Desert creature is.

Hazardous Habitat

The Mojave Desert ranges across southern parts of Nevada, California, and Utah, plus northern Arizona. The plants and creatures that live there have remained unchanged for thousands of years. The environment allows the natural balance of plant and animal life. Within that desert habitat, the wildflowers, bushes, and sandy soil provide the tortise with the food, moisture, and shelter it needs to survive.

Because of its peculiar life cycle, the odds of survival are not in the tortoise's favor. Tortoises take a long time to reach adulthood. A young tortoise's shell does not harden until it is about 4 years old, making it easily ingested by predators.

Wild tortoise females do not lay eggs until they are about 20 years old, which is part of the reason why tortoises could become extinct so easily. And, while one female may lay up to 14 eggs in the spring, only about 1 to 5 percent of the hatchlings will survive to adulthood.

The reduction in the natural desert environment also affects the survival rate of the desert tortoise. Man's impact on the desert ecosystem can influence the chances of a tortoise having sufficient forage and shelter to survive.

Concerned Agencies

The Mojave Desert Range Project is composed of a group of Extension specialists from the four-state area concerned with resolving multiple-use conflicts of Mojave Desert range land.

Within the scope of the Project is a subcommittee devoted especially to the Mojave Desert Tortoise. Committee members include representatives from the Bureau of Land Management, the Fish and Wildlife Service, and the TORT Group (an organization for the protection of Nevada's resident tortoises).

Initially the subcommittee gathered input from ranchers and environmental and special interest groups to assess concerns on the welfare of the tortoise.

"The subcommittee found that a major threat to the tortoise's survival is predation by man," says Dave Torell, Southern Nevada Extension livestock specialist and president of the Mojave Desert Range Project. "The first step we decided to take was to educate the public on just how fragile the tortoise and its environment are. The committee felt that the best place to start was with the youth," he adds.

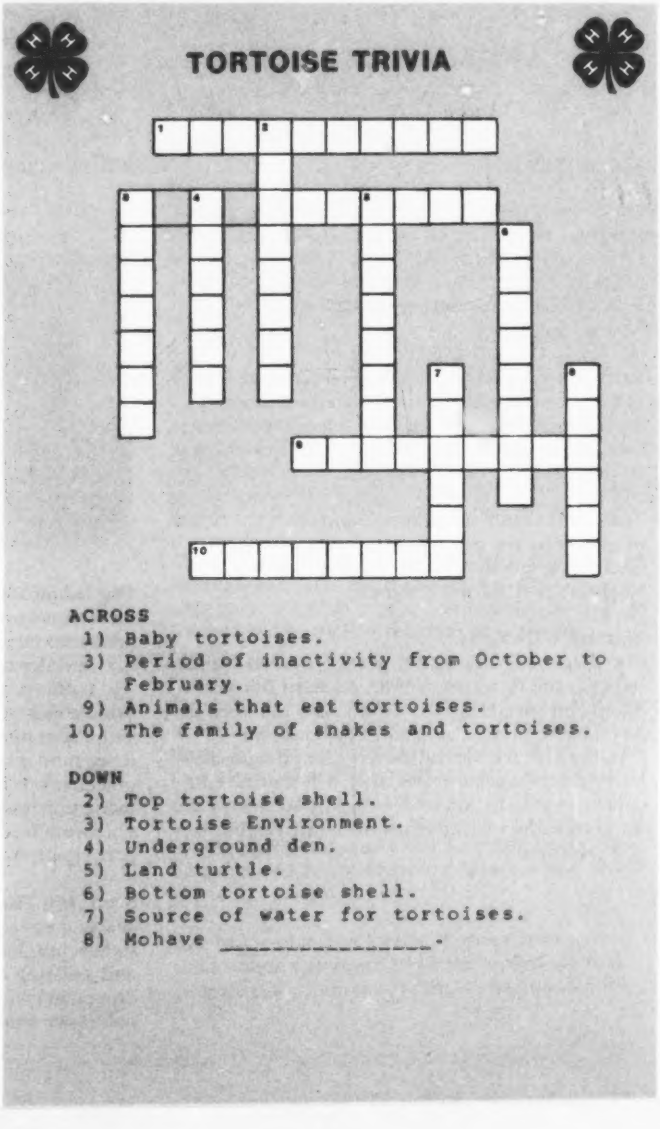
Torell presented the committee's ideas to Bob Norris, Southern Nevada area Extension specialist, 4-H. "Initially, we met with the school district's curriculum specialist to determine at what educational level a Desert Tortoise Program would be most relevant," explains Norris. "From that point we developed the program around information garnered from the University of Nevada's College of Agriculture, the Bureau of Land Management, the Department of Wildlife, and the TORT Group."

Implementing The Program
Susie Askew, Extension associate, 4-H, began a campaign to market the Desert Tortoise Program to Clark County elementary school teachers. Askew sent fliers to elementary schools announcing the program. "Because most teachers thought the program was relevant to and needed for their curriculum enhancement, Desert Tortoise quickly became a popular program for 5th and 6th graders," says Askew. "Since the program's beginning 3 months ago, we have taught over 400 students," she adds.

The program includes a color slide presentation, developed by the Desert Tortoise Preservation Committee. The script, adapted for the 5th and 6th grade educational level by Norris and Torell, tells about a day in the life of a desert tortoise. The slide program explains the reproductive cycle of the tortoise, plus how the tortoise manages to survive in its harsh environment.

After the slides, each student completes a crossword puzzle, called "Tortoise Trivia," to reinforce the knowledge gained during the program. Participants also receive a take-home handout on the desert tortoise to share with their parents.

"It's great to see excited youngsters learning about their environment in relation to the desert tortoise," says Norris. "Through the Desert Tortoise Program, the kids have gained a new respect for the fraility of the desert and its inhabitants." □



TORTOISE TRIVIA

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ACROSS
1) Baby tortoises.
3) Period of inactivity from October to February.
9) Animals that eat tortoises.
10) The family of snakes and tortoises.

DOWN
2) Top tortoise shell.
3) Tortoise Environment.
4) Underground den.
5) Land turtle.
6) Bottom tortoise shell.
7) Source of water for tortoises.
8) Mohave _______________.

Top: Two 4-H'ers, 6th graders in Las Vegas Nevada, meet the desert tortoise as part of an environmental education program based on this fragile creature of the Mojave Desert. Left: A "Tortoise Trivia" crossword puzzle reinforces student knowledge about the new 4-H program. Right: Predation by man is the greatest threat to the survival of the desert tortoise.

Exploring The World Of Water

Barry W. Fox
Extension Specialist
4-H Marine Education
Virginia State
University, Petersburg

Top: 4-H'ers participating in Virginia's 4-H Marine Program pull in a seine to discover the sea creatures they will study. This scene took place at the Senior 4-H Marine Leadership Camp at Virginia Beach where youth gain leadership skills and knowledge of the marine environment. Below: 4-H youth gain hands-on experience as they explore the ocean's resources.

The seine is pulled out of the water by a group of excited 4-H youth who enthusiastically pick up a myriad of wiggling fish, shrimp, and other marine organisms. There are squeals of delight and surprise as the youth place them in buckets for observation.

Further down the beach other 4-H'ers perform water chemistry tests, study plankton samples with microscopes, or measure wave and current motion; all under the watchful eyes of their adult volunteer leaders and 4-H agent.

These 4-H youth are gaining hands-on experience in observing the environment and exploring the fascinating world of water by participating in Virginia's 4-H Marine Program.

Started With Grant

The Virginia Sea Grant Program provided a grant to begin the Program in 1981. Richard Booker, Extension specialist, 4-H Youth, saw the need for an effective marine education program for Virginia 4-H and submitted the grant proposal. Barry Fox, Extension specialist, 4-H marine education, began the job of developing strategies and implementing marine education into Virginia's 4-H curriculum.

The major objectives of the Program are to increase awareness and appreciation of youth and adults for the environment, provide leader training, and develop educational resources.

The Program, now supported by the 1890 Extension Program at Virginia State University, uses three modes of delivery to accomplish these objectives: school and community 4-H clubs, summer camp and special field programs, and adult volunteer leader and 4-H agent training and participation.

Studying The Environment

Warm weather months mean numerous field trips to beaches, lakes, and streams for Fox, 4-H'ers, and assisting agents and leaders. In addition to coastal marine habitats, inland freshwater environments are studied.

Field studies are not the only activity of the 4-H Marine Program. Historical, economic, and management issues concerning marine and freshwater resources are integrated into the Program.

To better explore these topics and help plan activities and events, the 4-H Marine Program receives assistance from The Mariners' Museum, Chesapeake Bay Foundation, Virginia Game Commission, Virginia Institute of Marine Science, Marine Advisory Service, and other organizations.

Since June 1981, approximately 5,000 youth have participated in more than 40 special marine and freshwater 4-H field programs in Virginia, ranging from 1 to 5 days in length. These programs involved more than 35 counties and approximately 140 adult leaders. In addition, marine and freshwater education classes were periodically taught at Virginia's six 4-H Educational Centers.

4-H School Club Projects

The Program provides educational activities for Virginia's large 4-H school club membership through a series of 4-H marine projects for students grades 4–7. Four projects are available which explore physical properties of water, aquatic and marine ecology, ocean structures and tides, and marine resources.

Additional marine project publications are planned on topics including taxonomy, pollution, and marine related careers. Besides the project publications, information is offered on a wide variety of other activities ranging from aquarium management to taxidermy.

Through workshops and special presentations, Fox trains teachers, leaders, and agents in a number of marine and freshwater education topics. Educational resource development is always included to help participate build their own programs.

4-H Marine Camp

In 1982, Fox and 4-H Agent Joseph Hoffenberger conducted a 4-H Marine Day Camp in Virginia Beach with assistance from VIMS Marine Advisory Personnel and the Citizens Program for the Chesapeake Bay. That camp program resulted in two major accomplishments—the formation of a 4-H Scuba Diving Club and a pilot for a statewide Senior 4-H Marine Leadership Camp.

Measuring water table depth can look more dangerous than it is. Since 1981, approximately 5,000 youth have taken part in more than 40 special marine and freshwater 4-H Virginia field programs

The Virginia Beach 4-H Scuba Diving Club, led by Hoffenberger and Adult Leader Ann Retz, is the only such 4-H club on the East Coast. The club has assisted in a VIMS eel grass restoration project.

The Senior 4-H Marine Leadership Camp, started in 1984, provides senior 4-H Youth the opportunity to gain leadership skills and subject-matter knowledge in environmental education. The 1985 camp, attended by 76 youth and adults, included an overnight canoe trip, an estuarine river ecology program, and a special study program cosponsored by the Mariners' Museum and Chesapeake Bay Foundation.

The major objective of the Marine Camp is to train senior 4-H youth to be the environmental educators for junior 4-H camps and community

4-H'ers and adult volunteer leader wade into the surf to study wave height. The 1890 Extension Program at Virginia State University supports this marine education.

clubs across the state. Many camp participants have already started sharing their new knowledge and skills with other 4-H'ers.

Fox and Hoffenberger are developing plans to pilot a 4-H Marine Day Camp for the Disabled in Virginia Beach. The camp will provide field experiences designed to meet the special needs of disabled youth.

County Programs

Many counties in the state are developing their own marine and freshwater field day programs with assistance from the specialist. Fox is working to provide each district with their own field equipment and trained leaders.

Environmental Awareness

"We're not trying to make scientists of these youngsters," says Fox. "First we get them excited, catch their interest, help them overcome any fears or apprehensions they may have of the natural world, then let them explore and discover.

"The experiences of seeing the natural world close up and discovering how organisms live and coexist will always be remembered," he adds.

"The 4-H Marine Program helps youth develop positive attitudes toward the environment so they will make responsible decisions as adults." ☐

Our Working Environment

Ann Whiteside
Associate Professor of Interior Design, Human Environment: Design & Textiles
and
Linda Reece
Extension Home Furnishings Specialist
University of Kentucky, Lexington

Good office planning involves all office personnel and gives careful attention to products, procedures, people relationships, environment, and equipment.

In today's complex communication age, poorly designed office or obsolete office facilities and procedures can influence the effectiveness of the Extension office in the community. An inefficient work environment results in disorganization and contributes to low employee morale, lack of job enthusiasm, and low productivity.

The reception area establishes the atmosphere for the entire office. A 42-inch reception counter provides private workspace for the receptionist while allowing interaction with the public. Design the area to screen plant specimens and soil samples from office visitors. Display Extension and USDA publications in the reception area where visitors can review and select timely publications without assistance. Seating for four to six guests is adequate for most offices.

The Office Hub

The clerical workspace is the hub of a well-run office. The reception and clerical workspace may be combined in small offices. Movable 45- to 60-inch-high acoustical screens or file cabinets with attached acoustical panels reduce noise, provide visual privacy, and serve as a tack surface (bulletin board). Each employee, if possible, should have visual accessibility to a window for psychological and physical comfort.

As more Extension offices acquire microcomputers, space must be planned in either the clerical work area or in a small separate office. The keyboard, display screen, and printer support surfaces need to be approximately 24 to 30 inches deep. The minimum length of 5 to 6 feet can be either one continuous surface or an "L" arrangement. A learning center can be included here for study of video cassettes, slide sets, audiotapes, self-study programs, and other resource materials.

Central File Location

Filing systems vary. Central files containing information related to the entire office may be placed in the clerical work area or at a central filing location. Place subject matter files in one central location for more economical use of space. Personal files should be located in individual workspaces.

A well-designed workroom is critical to the efficient operation of the Extension office. A service entrance will facilitate in receiving deliveries, loading supplies, and moving equipment. Install one-way windows, a buzzer, or flashing light system to alert the employee to office visitors.

Design space to accommodate both existing and future workroom equipment. One of the best solutions is a built-in "L" or "U"-shaped counter, with or without a sink, that is 18 feet × 25 feet long, 24 inches deep and 36 inches high. For seated tasks, plan a 30-inch-high work surface. Store paper and other supplies in base and wall cabinets. Sliding base cabinet shelves make all supplies easily accessible.

Publications Storage

Store publications in or near the workroom to allow for easy delivery, loading, and assembly of program materials. A metal open-shelf lateral filing system (frequently used in dental and medical care facilities) is the most efficient storage method.

Most agents need private offices to allow for counseling. These offices should be easily accessible from the reception area. Although needs vary, basic furnishings may include: a 30-inch × 60-inch desk; a 30-inch × 5-foot-long table, desk return, or credenza; a chair; 1 or 2 four-drawer file cabinets, 15 to 20 lineal feet of book shelving; 2 guest chairs; and a small conference table. Minimum square footage required is 120 to 150 square feet.

A small conference room should be provided to accommodate 12 to 15 people sitting at a table for staff meetings or small training sessions. We recommend a wall-mounted dry erase board (chalkboard), a wall tack surface, and a ceiling mounted projection screen. Cabinet units can provide both storage and operating surfaces for audiovisual and other required equipment.

Most offices today recognize the need for an employee area. Ideally this is a separate room with table, chairs, small kitchen, and restroom facilities. This space should be separated from the small conference or community room.

Materials And Color Values

Flooring materials in medium-range color values and heather textures provide a good background for furnishings and are the easiest to maintain. A wainscoting of paneling or commercial grade vinyl protects the lower wall in corridors and other heavy traffic areas.

If new furniture is purchased, consider color and design compatibility with existing pieces. Metal or wood chair arms will wear longer than upholstered arms.

Professionally designed exterior and interior signs that are easy to see and read support a professional image. When designing new or renovated office facilities, the above considerations will help in planning an efficient work environment that will contribute to your Extension program. ☐

Water Watch

Eleanor J. Walls
Extension Housing Specialist
University of Arkansas, Little Rock

An important issue Arkansans face is the appropriate use and protection of the state's water. Through a statewide Extension program called Water Watch, Arkansans have increased their understanding of water issues and of the importance of water conservation.

Water is an abundant resource in Arkansas, but there is an uneven distribution and no legal vehicle to control redistribution or sale of either surface or groundwater.

A comprehensive water code was drafted by a Water Study Code Commission, appointed by the governor, but was defeated in the 1983 legislative session. During the 1985 session a second code was proposed but many Arkansas residents were unaware of the need for or the implications of the proposed legislation.

Two-pronged Effort

Water Watch became a two-pronged effort to (1) help citizens become aware of all sides of the water control issue and (2) to encourage water conservation and management by Arkansas citizens.

These efforts were implemented through the Arkansas Extension Homemaker Council's Housing, Energy, and Environmental program and the Citizenship, International, and Community Outreach program of work for 1984–86.

In addition to providing a needed educational service, Water Watch provided a vehicle for Extension Homemakers to reach new audiences, to recruit new members, and to become more active in public affairs.

In the first prong of the program Extension planned and implemented countywide public forums were issues relating to proposed water policies and potential implications could be discussed. The Extension Homemakers were the organizers and the facilitators of these forums.

Speakers included such interested parties as Arkansas Farm Bureau members, members of the Arkansas Bar Association, legal aides from the Attorney General's Office, the Dean of the University of Arkansas School of Law, well drillers, members of the 1983 Water Study Code Commission, legislators, and farmers.

These forums allowed all viewpoints of this very emotional issue to be discussed, which enabled the voter to make a more informed decision.

Reduced Consumption

The second prong of Water Watch encouraged individuals and families to discover ways to reduce water consumption without drastically altering their lifestyles.

Copies of the publication, "Water Conservation Checklist," purchased from USDA, were distributed. When the supply was depleted, the publication was reprinted in Arkansas. A coupon contained the Extension Homemakers Council (EHC) logo, space for the participant's name and address, and space for individuals to list five water use practice changes they planned to adopt.
A sample of these participants will be drawn in the fall of 1986 to do a follow-up evaluation.

Over 11,000 copies of the checklist were distributed at the forums, fair exhibits, "Water Days" special interest meetings, booths at banks, malls, and local stores, and, in one county, at tables near polling places on election day.

Four-H members have also been involved to support the community outreach segments of their 4-H projects. A senior 4-H member won first place in the state consumer education division using Water Watch as a demonstration topic.

Implementing Water Watch

To implement the program, state Extension specialists in family housing and in public affairs conducted a leadership and subject matter workshop. This was followed by five district training meetings involving the Housing, Energy, and Environment chair; the Citizenship, International, and Community Outreach chair; and an Extension agent in home economics from each county.

The district EHC chairs assumed leadership roles in these training meetings. Extension specialists and members of the 1983 Water Study Code Commission presented subject matter information. The training content included information about uses and water rights, assessing local situations, and other program planning information, including how to structure a forum.

Accurately assessing the local situation was critical to the success of the forums, since water supplies, needs, and uses, as well as the attitudes of people, vary across the state. In a few counties, the issue is such an emotional one that local Extension Homemakers felt they should not initiate any type of forum.

Support materials prepared for the programs were varied: leaders' guide, a leaflet, slide sets, and a continous tape to use with a slide set for fair exhibits. Mass media efforts included radio scripts, newspaper articles, and an award-winning television public service announcement. The PSA was aired during the closing ceremonies of the Olympics.

Results

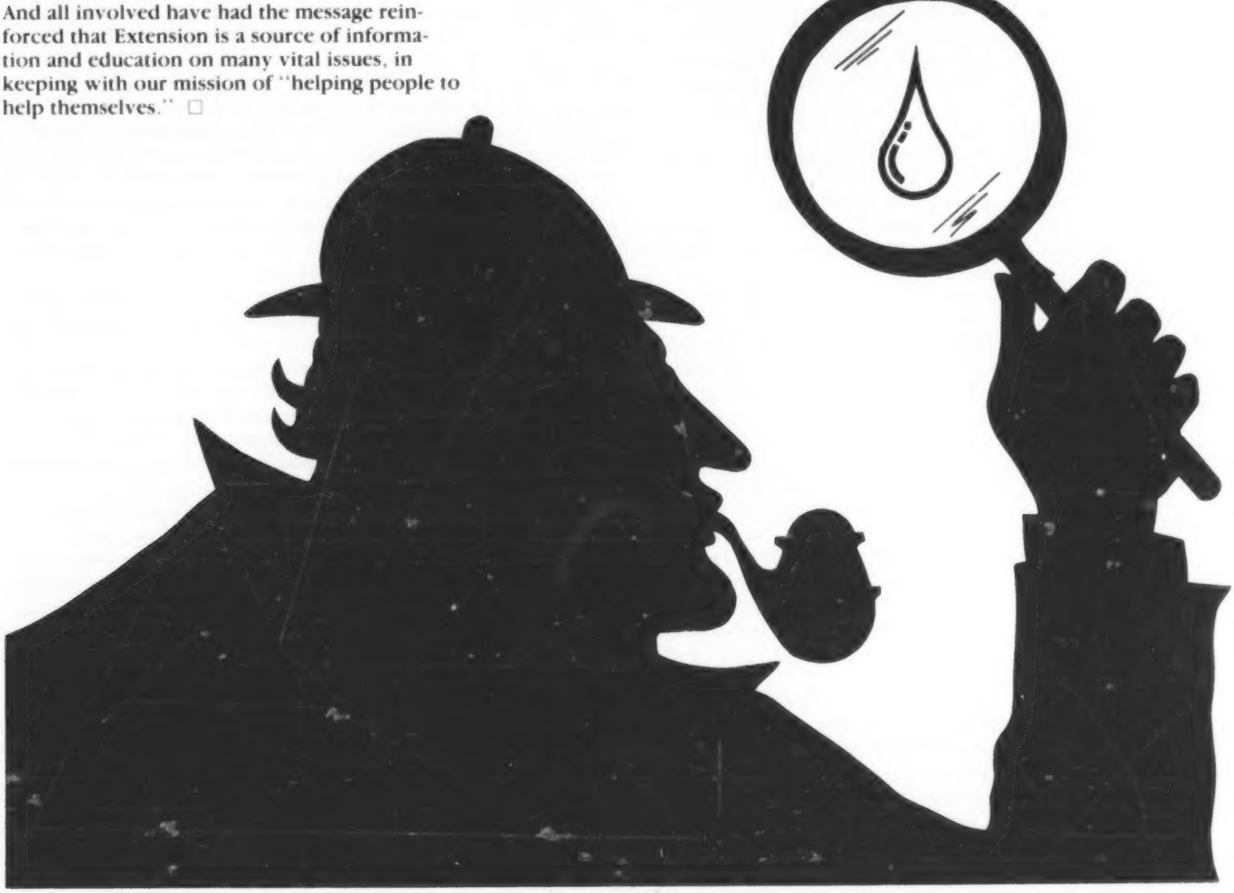
Efforts with the Water Watch program were successful. Some 374 leaders in 187 clubs in 16 counties reached 16,093 individuals with some type of water conservation information. Many of these individuals were new to Extension educational programs.

In one county, 45 of the 60 people attending the forum had never attended an Extension activity. In another county, 67 volunteers gave the checklists to over 3,000 people near 22 polling places during the May 1984 primary election. The volunteers ran out of checklists at all locations. Two hundred of the returned coupons indicated 472 water use practice changes would be adopted.

As a result of Water Watch, Arkansas families are more informed on water issues in the state. A proposed comprehensive bill was defeated in the 1985 session and a bill requiring annual reporting of water usage was passed. The Soil and Water Conservation Commission was empowered to conduct water usage studies and develop guidelines for evaluating proposed interbasin transfer.

Leadership skills of volunteers and networking skills of county Extension faculty were reinforced through the involvement of both new audiences and, in several instances, community leaders who had not previously been involved in Extension program planning. Arkansas legislators have become more aware of the interests and concerns of family and environmental issues due to the Water Watch program.

And all involved have had the message reinforced that Extension is a source of information and education on many vital issues, in keeping with our mission of "helping people to help themselves." □



The Impact Of No-Till and Lo-Till

G. Morgan Powell
Extension Liaison,
National Association of Conservation Districts
Conservation Tillage Information Center
Fort Wayne, Indiana

Many Extension specialists and agents have focused their education programs on conservation tillage in recent years. Following are a few which have had substantial impacts.

Delaware—A No-Till Leader

The Conservation Tillage Information Center's acreage survey shows Delaware as the leading no-till state, with nearly 60 percent of the corn, 95 percent of the double crop soybeans, and 23 percent of the full-season soybeans.

Extension Agricultural Engineer, Tom Williams, credits Delaware's no-till achievements to three factors: Extension foresaw the possibility of this new technology and responded with a demonstration program (begun in 1969) to meet the need ahead of the demand; team effort between experiment station scientists and Extension specialists from all college of agriculture departments enabled development of workable conservation tillage crop systems, especially for no-till; and the timing was right—the 1973 energy crisis gave a major boost to early adoption of no-till.

"About 1981, the emphasis shifted from row crops to solid seeding," Williams says "when some soil conservation districts leased no-till drills for demonstration of solid seeding for small grains and soybeans." County agents and Soil Conservation Service technicians have aided districts to insure accurate drill setting and successful cropping. Experiment station scientists continue to compare and evaluate different tillage systems for row crop and small grains.

Minnesota Field Demonstrations

"Field demonstrations with farmer cooperation and equipment were essential for a 93 percent increase in ridge-till corn in 2 years (1983–85)," explains John Moncrief, Extension agronomist with the University of Minnesota. This program has become popular with farmers because they can relate well to the farm-size plots planted and harvested by the cooperator with normal farm machinery.

In local planning, the county Extension agent, Soil Conservation Service District conservationist work together with an innovative farmer cooperator. They look for a successful conservation tillage cooperator with the necessary equipment. Sequences of crops common to the area (corn/soybean, corn/alfalfa, and small grains) are planted with three to five treatments, including disk chisel, ridge-tillage, and no-till.

The Minnesota conservation tillage program is multidisciplinary involving specialists in all departments and cooperation with SCS and ASCS. Success of ridge-till adoption has been helped by rapid growth of farmer ridge-till associations where farmers share success and failures. Extension tracks production inputs and yields so a statistical analysis can be done to show whether one tillage system is more profitable than another.

Oklahoma Lo-Till Spin-Off

"Conservation tillage programs aimed at continuous wheat in the plains should only be undertaken by the adventurous," advises James Steigler, Extension agronomist at Oklahoma State University. Several specialists who saw a need began Oklahoma's lo-till program in 1980. They were encouraged by grants in 1981–84 from the Oklahoma Wheat Commission.

The adoption of lo-till for continuous wheat from this educational program has not been as successful as originally hoped. The decline in wheat prices, lack of herbicide choices for winter annual grasses in wheat, and the fact that crop rotations generally do not compete with weeds are contributing factors.

Project accomplishments to date include: A 30- to 40-percent small-grain residue cover which usually requires no special planting equipment; the possibilities of conservation tillage brought to the forefront in Oklahoma; the spinoff of conservation tillage for soybeans; and strengthened research effort on conservation tillage.

Though lo-till will work, it is not economical for continuous wheat right now. A change in attitude toward rotations or new herbicides could make the adoption of lo-till wheat an economic positive.

Ridge-Till With Furrow Irrigation

In Nebraska, ridge-till corn acreage nearly tripled from 1983 to 1985. "Ridge-till has been a component of the Extension Conservation Tillage Education Program since 1979," explains Elbert Dickey, Extension agricultural engineer, University of Nebraska. Dickey gives much credit for adoption success to research on tillage systems since 1976 at the South Central Research and Extension Center, Clay Center. Fifty percent of the systems researched there contain a form of ridge planting.

"Ridge tillage fits with furrow irrigation like a glove fits the hand," Dickey says. "It is a natural to use ridge-till on furrow irrigated row crops because operators already create a ridge in the normal process of preparing for furrow irrigation."

Dickey believes that ridge-till is especially economical on furrow irrigated corn because it eliminates preplant tillage, uses less herbicides by banding, and requires no more cultivation than is normally used to build ridges for irrigation.

Dickey, in summing up Nebraska's experience with conservation tillage says, "Do not be content with what you are doing. There is always a better way." ☐

Water Crisis In The West

Sue Herndon
Extension Housing and
Equipment Specialist
(Retired)
and
Marla Barnes
Extension Agricultural
Information Officer
Department of
Agricultural
Information
Oklahoma State
University, Stillwater

Many consumers take water for granted. They continue to believe that water is abundant, clean, safe, and inexpensive. However, in Oklahoma, population growth and changes in lifestyle have increased water usage. As a result, water isn't so abundant, clean, safe, and inexpensive any more.

Over the past 2 years, Extension specialists and university researchers at Oklahoma State University have pooled their efforts while educating nearly 50,000 people about water conservation. The National Extension Committee of the Joint Council identified the need for clientele education about water quality and quantity and the importance of water conservation.

Many Oklahoma communities have been facing the realities of limited water supply, pollution, and worn-out water distribution systems. And, they've been learning the real meaning of such terms as "water resources management" or "water conservation management."

Water conservation education, including educational programs and installation of water devices, seemed to work in Oklahoma when people were experiencing a real crisis. But once the crisis was over, many consumers reverted back to former water usage behavior unless they were frequently reminded of the benefits that come from water conservation efforts.

At Oklahoma State University, researchers have been trying to overcome this problem for the last 10 years. A University Center for Water Research (UCWR) coordinates scientific and empirical research concerning water quality and works with the university to pass on the information to consumers.

Study Grant
In 1981, the College of Home Economics at Oklahoma State University received a study grant from the University Center for Water Research. Researchers wanted to identify effective ways that small water suppliers could encourage consumers to reduce water consumption without increasing water rates. In addition, the researchers wanted conservation practices to be easy and inexpensive.

The college chose a small rural Oklahoma water district to use as a study sample. Researchers wanted to discover if residents of the district used less water as a result of water conservation education and use of water saving devices.

The researchers worked with Extension housing specialists to develop educational materials. These materials were mailed to residents every 2 weeks for 3 months. An evaluation indicated that 20 percent of the residents reduced the amount of water they used, simply as a result of the educational material they received in the mail. Nearly half of the residents who received the material plus water saving devices reduced water usage.

In 1984, as a result of favorable response from that water district, Extension home economists decided to conduct another pilot study with a small rural community that has water quality and quantity problems.

Conservation Pilot Study
Each of the households in Yale, Oklahoma, received water saving devices—free of charge—to install in the shower and toilet. In addition, water conservation educational materials were mailed to residents with monthly water bills for 6 months.

At the end of 6 months, residents completed a questionnaire that required them to compare their meter readings before and after the study. The response showed that educational materials and water devices were effective in lowering water consumption in several households.

The next year, state specialists decided to offer water conservation education materials to Extension staff in counties where water problems existed. A task force developed strategies to implement the water education program. From the work of the task force, a training manual was developed for county home economists' use. Ten counties decided to participate.

Target audiences reached included 4-H youth, school children under 10 years of age, Extension Homemakers' councils and clubs, employees at worksites throughout the counties, and water policy decisionmakers and community leaders.

Promoting Awareness
In addition, home economists promoted water conservation awareness through television public service announcements, newspaper stories, and radio interviews.

Water continues to be a problem in Oklahoma, but because of this Extension education effort, people are more aware of the problem and what they can do to conserve Oklahoma's water.

Some people have even cut back on water usage. Follow-up reports show clientele reached by county home economists have reduced water use by an average of 10 gallons a person and saved a total of $27,000.

For more information about the water conservation program, or to receive an educational training manual titled, "Water Conservation: A Community Based Program," contact:

Marla Barnes
Extension Agricultural Information Officer
Department of Agricultural Information
Oklahoma State University
Stillwater, OK 74078 ☐

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The Cooperative Extension System Logo: Description and Usage

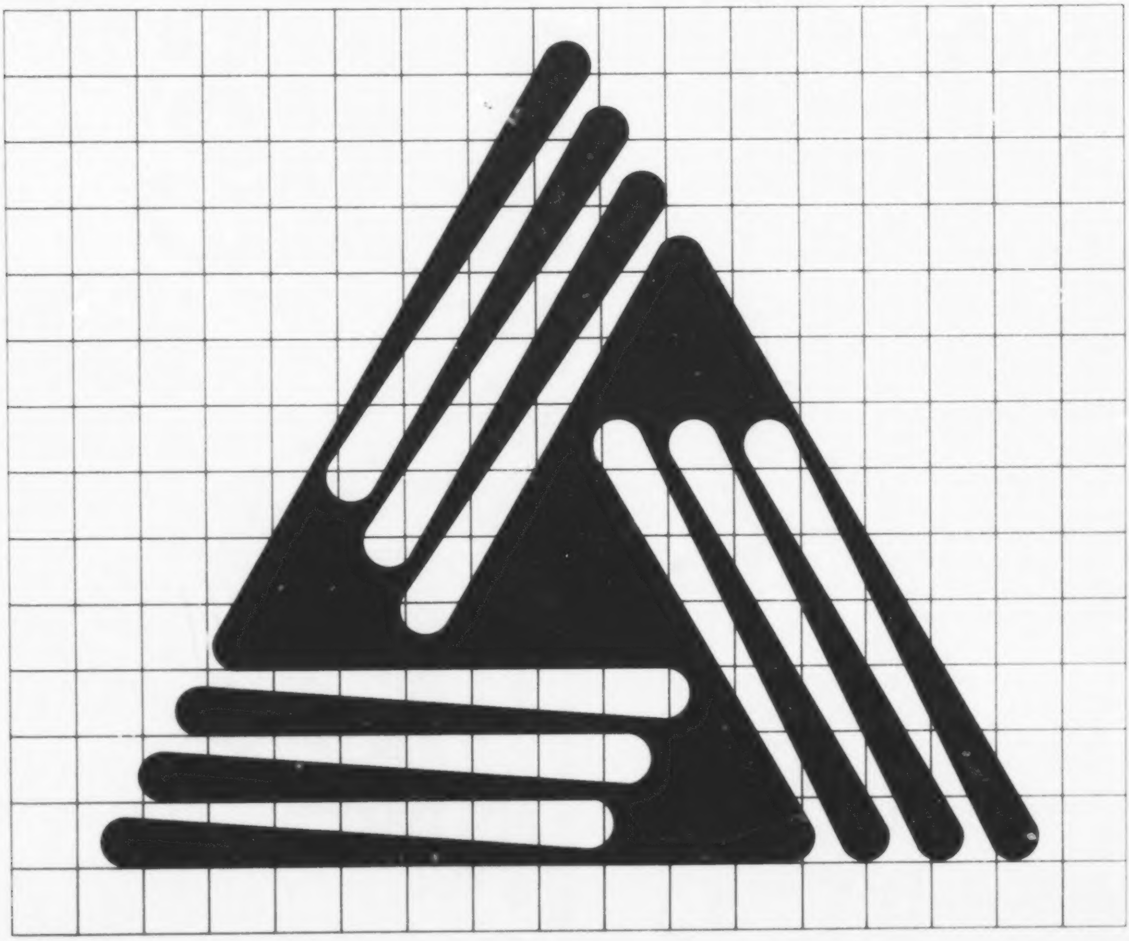
Our new logo is a striking, graphic triangle which symbolizes the strong, equal partnerships within the Cooperative Extension System — federal, state, and county, and Extension, research, and the private sector — and emphasizes their synergistic relationships. The logo will serve as the Cooperative Extension System "brand" or identity, signifying a mark of excellence in Extension education.

The triangle, also a sign of knowledge and change, emphasizes the vital role of Cooperative Extension in the food and agricultural sciences as a dynamic change agent and knowledge and technology base.

The logo should be applied as an identification element. As often as possible, it should appear next to the name "Cooperative Extension System" or the name of the State Extension Service it represents. The typeface recommended is Helvetica Medium Italic, flush left and rag right. The integrity of the complete logo shall be maintained in all uses. Additions and deletions to the logo are not permitted.

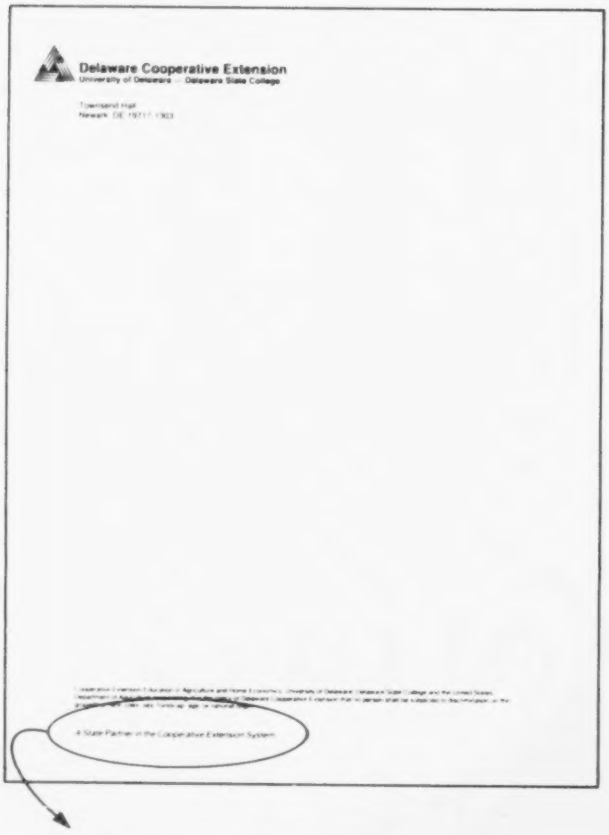
To maintain clear identification, the logo shall always appear proportionally isolated from other elements such as titles or graphic devices. It shall not be obscured by intersecting lines, shadows, or screens, or reproduced against strongly patterned backgrounds that would tend to impair its recognizability.

Logo With Superimposed Grid for Use in Making Non-photographic Enlargements



Use of Logo on Stationary

State Using Extension Logo Only



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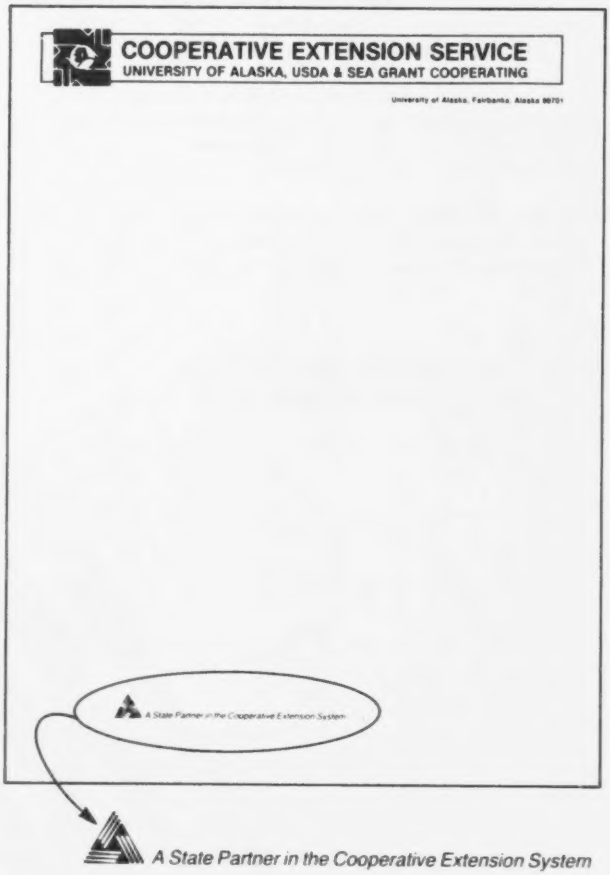
State Using Extension Logo in Conjunction With Existing State Logo



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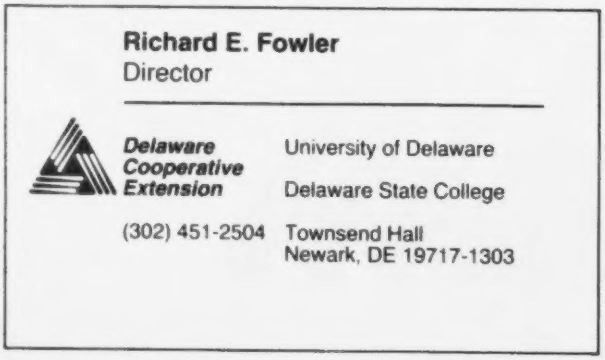

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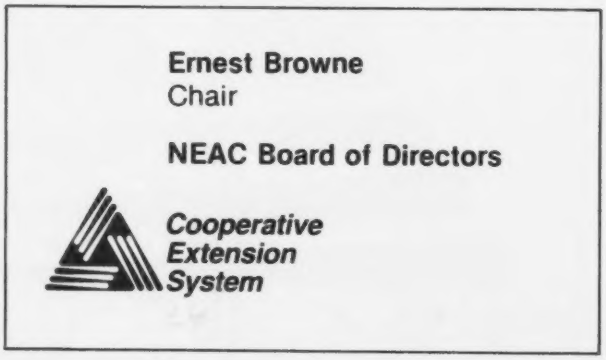

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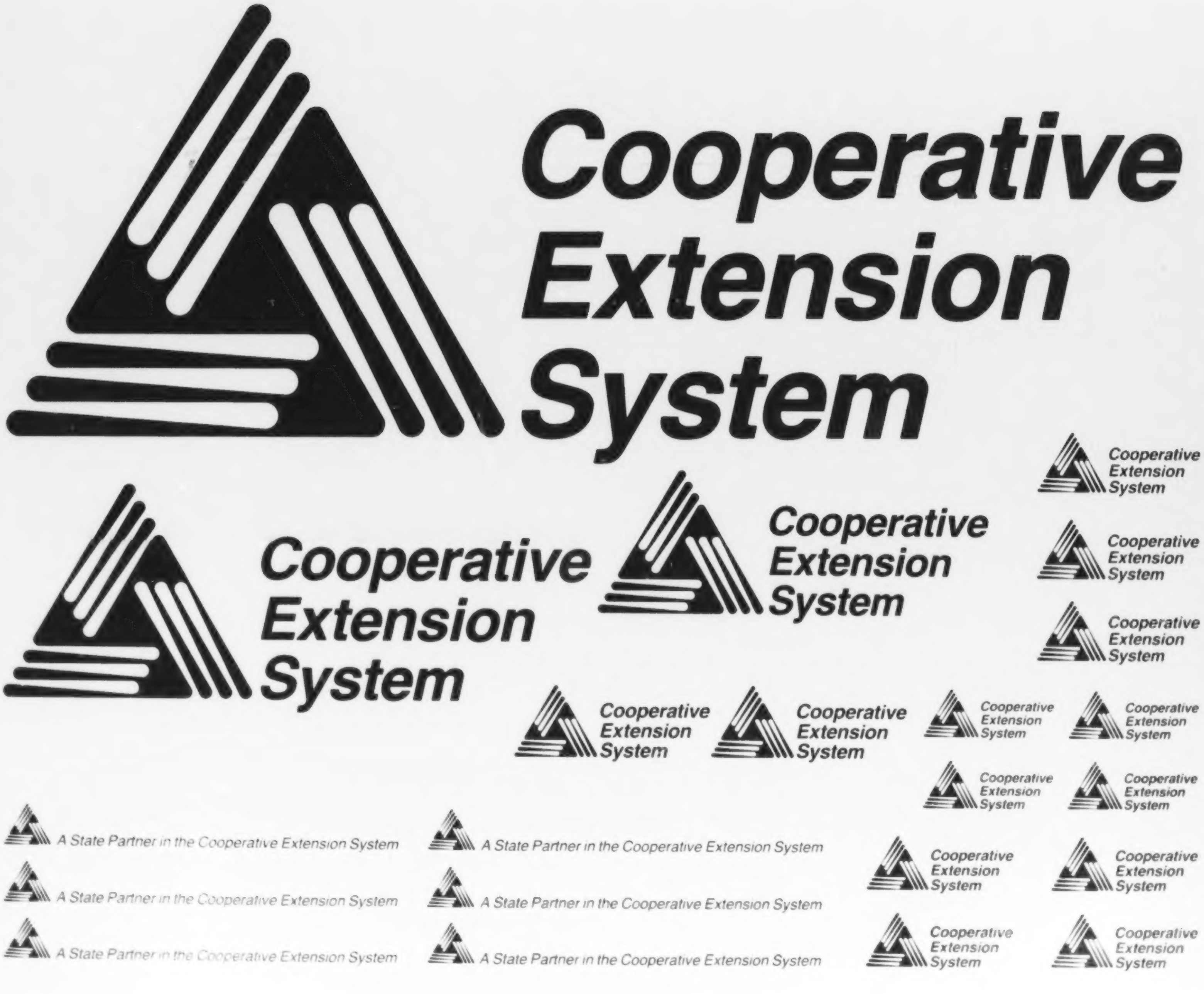
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extension review

United States Department of Agriculture Fall 1986

Change

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Change—For America, For The Cooperative Extension System

Change is no longer the exception—it is the norm.

Change is a dual-edged sword. It threatens our status quo while challenging us to stretch, to grow, to achieve beyond the safety of the here-and-now.

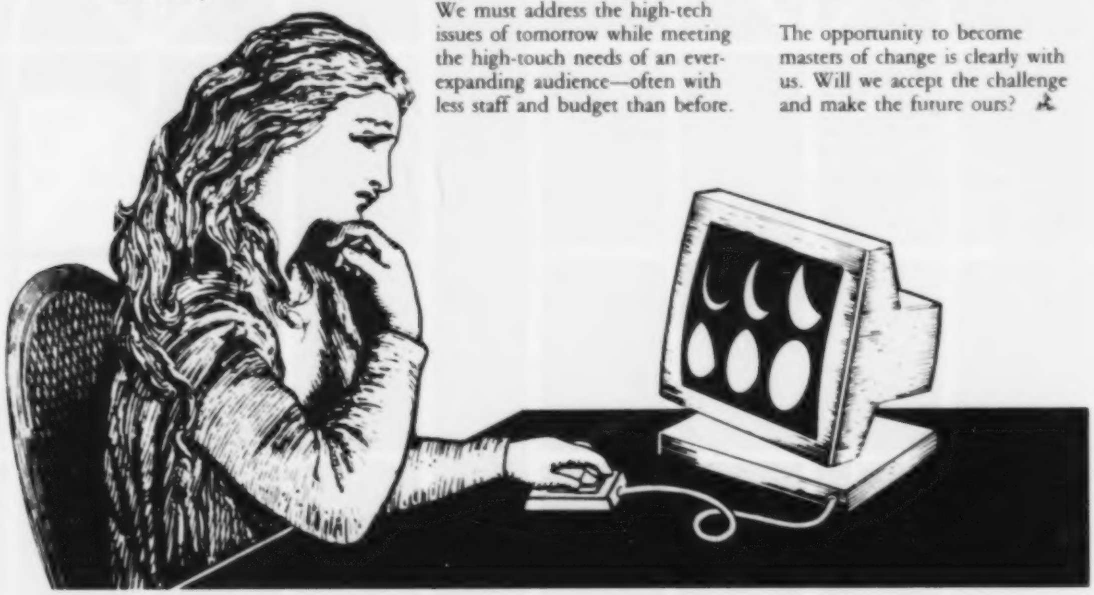
Social, technological, economic, and demographic—changes in all these facets of our American way of life continue to gain momentum as they rocket us into the 21st Century.

The Cooperative Extension System in the Year 2000 will be much different than the organization we know today. At all levels of the system—federal, state, and local—we are rethinking the way we do business. By identifying and addressing priority issues, we are molding our organization as a catalyst for future change.

Together we are reaffirming the basic premise of Cooperative Extension education—our role and responsibility as change agents. We must address the high-tech issues of tomorrow while meeting the high-touch needs of an ever-expanding audience—often with less staff and budget than before.

This issue of *Extension Review* documents the Cooperative Extension System of 1986—an organization in transition, an organization riding the wave of rapid change. Several state directors and administrators assess change and its impact on their states and the system in the lead article. Other articles explore new communications technologies, meeting the needs of diverse audiences, and new delivery methods and modes as the system copes with change in every facet of operation.

The opportunity to become masters of change is clearly with us. Will we accept the challenge and make the future ours?



Future Issues

Production schedules and focus of future issues of Extension Review are listed below:

- **Spring 1987.**
  "Food, Nutrition, And Health,"
  article deadline November 15, 1986

- **Summer 1987.**
  "Financial Strategies: Farm, Home, Community,"
  article deadline February 15, 1987

- **Fall 1987.**
  "Profitability And Competitiveness In American Agriculture,"
  article deadline May 15, 1987.

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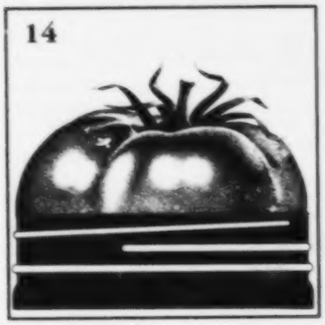

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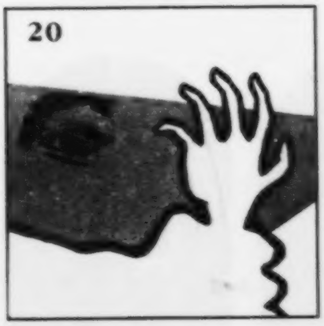

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Myron D. Johnsrud
Administrator Extension Service

Which Way, Extension? Directors And Administrators Speak Out

Judith Armstrong Bowers
National Program Leader,
Agricultural Communications
Extension Service, USDA

Coping with change—now, more than ever, the ebb or flow of our fortune depends on how well we catalysts—county, state and national—steer the Cooperative Extension System.

To learn about changes likely in Cooperative Extension nationwide I interviewed nine directors, two 1890 administrators, and the ES - USDA administrator. A major theme emerging from these discussions is an encouraging optimism, despite limited funds and lessened staff.

"I would have no qualms in advising young people to go into Extension. . .the future of Extension is very bright," states William Oschwald, Illinois director.

"I think Extension has an exciting future. This is one of the most exciting times to be in Extension," says Chester Black, North Carolina director.

The directors and the 1890 administrators interviewed see the diminished funding, smaller staffs, and shifting program mix as opportunities for Extension to do what it has done well to date: enable people to live better, richer lives in communities they have helped shape.

Interview questions focused on six areas: staff, programs, funding, volunteers, clientele, and the future.

Staffing Lean And Mean
No director or administrator spoke of expanding staff. Most have retrenched or will be doing so. Rachel Tompkins, West Virginia director, foresees a major change in Extension organization as her staff numbers drop to about 28 percent of the current size.

Some directors and administrators plan to add a few staff in certain areas.

Staff functions are changing. New Jersey Director John Gerwig predicts more regionalization and multistate cooperation will occur and that he might meet short-term needs by buying one month's time of an Extension specialist from another state.

Staff will work together in new ways. Minnesota Director Patrick Borich expects that issue response teams of Extension staff, and possibly, clientele, will pull research from labs and departments, put together programs, and market them. Myron D. Johnsrud, ES administrator and former North Dakota director, described such a group, also to be pulled together for major crises, as a strike force, with its own mission, budget, and goals it will develop and deliver.

Arizona's Roy Rauschkolb sees a change in the type of people hired—they will have a solid scientific base in subject matter so they can solve their clientele's problems. Chester Black, North Carolina director, also commented on the need for future Extension workers to be more technically competent than before, so they can adapt biotechnological research.

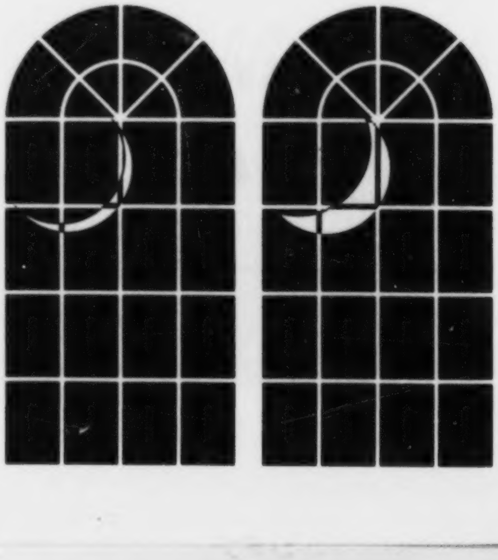
Programs Meet Clients' Needs
Not surprisingly, all directors and administrators supported strong, up-to-date programs based on clients' needs. All have responded in some way to the continuing farm-community financial crisis. Fred Harrison Jr., administrator of Georgia's Fort Valley State College, described SLIP, Small Landowners (farmers) Information Project, funded by Farmers Home Administration, to assist farmers facing foreclosure by that agency.

F. E. (Fee) Busby, Wyoming director, says the biggest change in the last 5 years, not only in Wyoming, is that people outside Extension do not understand the CES mission and that Extension does not know how to fit into the university system's priorities and programs.

"Extension needs to treat the farm, farmers, and farm family as a totality," Busby and other directors stress. The ag, home economics, and 4-H agents will integrate their programs together and meet jointly with the family, not separately with individual family members, the directors emphasize.

Extension Service Administrator Johnsrud characterized five phases of Extension history:

- Phase 1—1915-1930s basic educational mode with agriculture, home economics, and youth programs;
- Phase 2—1930s-1940s primarily operators of government farm programs;
- Phase 3—mid 40s through 60s, return to educational role plus problemsolving;
- Phase 4—mid 60s into 80s, program expansion to communities and urban areas, roller coaster agricultural economy, more targeted federal funding;
- Phase 5—1980s and beyond, in process.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For North Dakota and the Nation, Administrator Johnsrud emphasizes the close urban-rural relationship, that programs can no longer be clearly separated out as solely rural or urban. He and other directors and administrators stress the importance of marketing Extension.

Virginia Director Mitchell Geasler feels strongly that Extension should disseminate only research-based education, and that nonresearch-based wants of clientele can be met through volunteers. He, like other directors and administrators believes that solutions to all the problems of Extension clientele may not reside in one part of the land-grant university. Extension needs to go beyond the ag college and outside the university, if necessary.

Financial management and stress will remain major programs for at least the next 3 to 5 years, believes North Carolina Director Chester Black. Major changes in the infrastructure, more and more part-time farmers as Extension clientele, and increased use of technology will characterize his state's (and the Nation's) agriculture. "Contact with local people is the most important thing Extension does," he states.

Thornell Paige, Washington, D.C., director, sees choice of a few areas in which to work toward excellence as a sensible strategy during these days of tight budgets and staff retrenchments. Extension in the District of Columbia is focusing on food and nutrition related to health and family stability, as well as agriculture and natural resources with emphasis on horticultural programs.

Fewer Funds
Every director and administrator interviewed told of federal decreases in funding, often mirrored in the state level. Few mentioned declines in county levels. New Jersey's federal share has remained relatively the same the past 20 years.

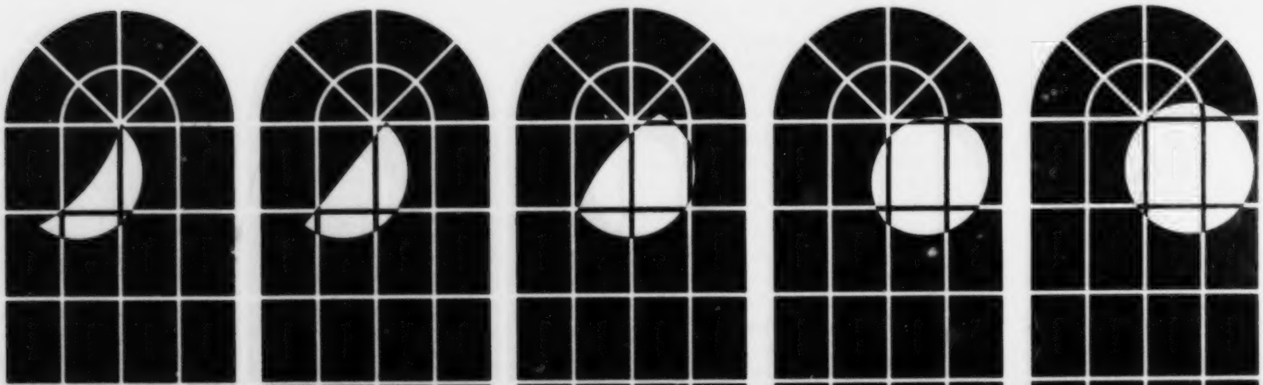
> ***"Today's clientele are more sophisticated and more demanding...we need to be dynamic!"***
>
> Myron D. Johnsrud
> Administrator, Extension Service

Minnesota received extra funds from the state legislature last year for a special financial crisis effort: Project Support. But since 1982, 88 positions have been cut, mostly because federal funding has not kept pace with inflation and salaries.

To meet their first cut, North Dakota staff built their budget from the ground up, deciding on what programs and positions to retain. State and federal funding shares have reversed; in 1973, the state paid 29 percent; the current figure is 42 percent. Federal funding has declined from 40 to 29 percent.

Virginia Director Geasler refers to the "excellent support from the localities," and strong state support, citing only the federal decline in funds as a problem one that could have a "negative impact on the rest of the contributors."

Grants and gifts add to funding in most states. In Arizona, grants and gifts are approaching the level of the county contribution. They are one way to "offset the reduction in funding," states Director Roy Rauschkolb. But, as most grants and gifts are earmarked, he emphasizes that they do not detract from the need for a core level of funds from federal, state, and county sources. From a base for the core program, "you get grants to let you do other things," he states.



The value of volunteer time plus grants exceeds what federal, state, and county sources supply, Rauschkolb points out. There's been a 30 to 50 percent return over time from research and Extension. "Instead of costing the government money, we generate money for it," he states.

Director Rachel Tompkins reports funding as the biggest change in West Virginia Extension. Decreases in all three funding sources have meant steady cuts in positions since 1980. Amounts for state pay increases not provided for in the federal or county share must come from operating funds, a fact true in many of the other states.

Volunteers—A Vital Ingredient

Minnesota Extension treats volunteers as another category of Extension workers. According to Director Borich, "The extent to which we continue to attract volunteers will influence success or failure of our strategy for the future." Clearly, all directors and administrators interviewed see volunteers as vital to Extension's future.

"We are building leaders and advocates for agriculture," says Wyoming Director Busby. "It may be more important to take a farmer, rancher, homemaker, and give them self-esteem and leadership skills than information on how to produce or run the house more efficiently," he states.

Extension Service Administrator Johnsrud points to the changes in types of volunteers because of two-income families, part-time farmers, and farmers working off-farm. "We need to change our mode of operation. . .have more flexibility in how we offer programs."

Most people who volunteer in Virginia do so for set periods of time rather than indefinite commitments, Director Geasler reports. "We need to involve more people for less time. . .accommodate to their time schedule," he adds.

ADVICE (Adult Volunteers to Improve the Community) expands Arizona Extension's ability to reach clientele. Director Rauschkolb reports that people interested in a given subject volunteer as well as those wanting to lead a club. They expect their time to be used effectively, he adds.

"I see exciting things in how we deliver programs through computers, mass media, and volunteers," says North Carolina Director Black about his state's 13,000 volunteers. "Our volunteers are sophisticated, more effective, and better trained by Extension staff."

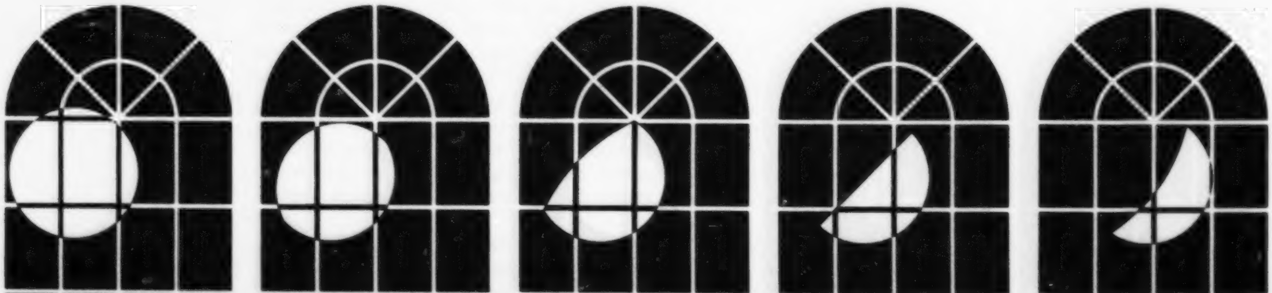
Illinois' older citizens are a "growing pool of volunteers," states Director Oschwald. Retired Extension staff are another source.

Clientele—Who Uses Extension?

"I define our clientele as people who have never participated in Extension programs at all, as well as those familiar with us," says Fred Harrison, Georgia 1890 Extension administrator. New Jersey Director Gerwig describes Extension clientele as including the positive farm operators. "Our land prices and taxes are so high that farmers must be the best in the business," he explains.

Minnesota Extension is expanding its clientele base greatly from 10 years ago. "The farm financial crisis is showing how agricultural problems relate to all the U.S. economy," states Director Borich. "We're going to do Project Support for small business. . .People are rediscovering the value of a land-grant university with a system of outreach."

Today's Extension clientele are "wider, more sophisticated, and more demanding," says ES Administrator Johnsrud. "If we have advisory committees, we need to be dynamic. . .they expect us to do things and get back to them," he concludes.

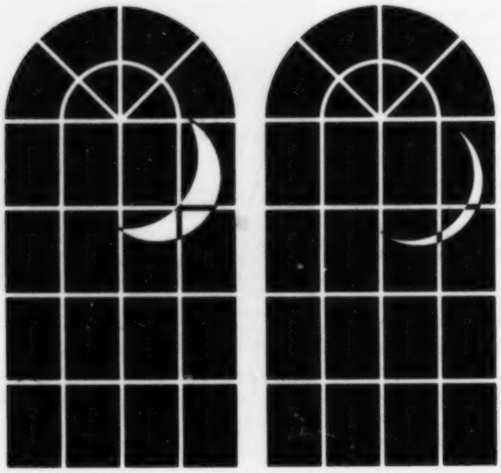


Leodrey Williams, administrator of Louisiana's Southern University and Agricultural and Mechanical College, speaks of how his staff spend time in face-to-face contact with clientele to assure that their needs are being met. This simultaneously assists the clientele in developing individually and as responsible and productive citizens. "We're working with small, part-time, limited-resource farmers and their families," he states. "We want to move these people into mainstream Extension, thus providing major opportunities for more involvement of these people and more effective use of our Extension resources." In many cases Southern Extension staff work with people who have never used Extension before. Or they are community leaders who have used Extension and will help legitimize the program to the intended clientele.

"We see everyone in the state as a client," reports Virginia Director Geasler. There are priorities: commercial agriculture; families, especially low-income with children; and community leadership. In Arizona 65 percent of the legislature is urban; 80 percent of the residents live in Phoenix and Tucson. Reaching urban clientele as well as traditional audiences becomes a challenge for Arizona Extension staff. Many of them work with volunteers to meet needs of urban residents.

Director Rauschkolb points out that the size-blind nature of research means that it can be applied no matter what the size of operator. Thus, anything developed for clientele who are commercial producers can be sized down to the individual and to the urban setting, a fact often missed by persons who argue that Extension only supports big farmers.

Many states now have state versions of NEAC, the National Extension Advisory Committee.



"I feel strongly that Extension belongs to the people," North Carolina Director Blacks says, "and it must be guided by an advisory leadership system that's county, state, and national." North Carolina's committee works closely with Extension County Advisory Councils, meeting yearly. The North Carolina committee signs off on Extension plans of work and reviews the Extension state budget request. The legislature views the committee as a legitimizing force. The 20 members roughly reflect program concerns in proportion to how funding is spent in the programs.

Black questions whether we could achieve urban support beyond the county level; he believes the consumer force has not rallied behind Extension as part of Extension's clientele. Yet meeting needs of urban clientele remains a continuing necessity.

The Future—Which Way Extension?
No one interviewed claims to have a crystal microcomputer to predict the road ahead. Yet certain themes keep emerging. Two of these seem to be up-to-date computerized communications and the understanding, adaptation, and application of biotechnology. "To stay relevant, we must keep up," says New Jersey Director Gerwig. "State-of-the-art communications technology is essential. . . get involved in biotechnology, shift more into doing this work," he advises.

No one interviewed felt Extension's day was done. Yet each one thinks Extension must and will change. To Fred Harrison, Georgia 1890 Extension administrator, Extension's future is bright "once we get through this drought...It's just a matter of fine tuning our programs and being sure we are responsive to our clientele's needs."

Points out Director Borich, "We have a window of opportunity for Extension and the land-grant system. We can have an organization that will really be responsive." The days for satisfaction over programs repeated regularly without change are over. Yet, Borich states, "the changes are invigorating to a lot of our faculty."

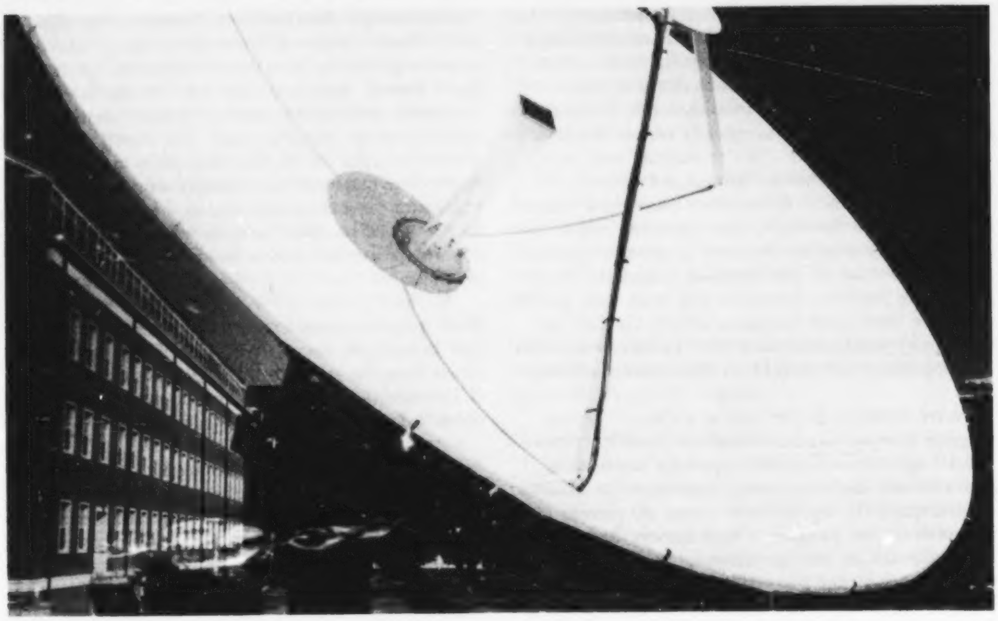
A third theme receiving considerable emphasis is that of marketing Extension—making what we do and how we do it visible, particularly to those with influence on our budgets. "Base it on performance, though," cautions Wyoming Director Busby. "There are things we could turn over to other people to do."

As to declining budgets, ES Administrator Johnsrud recommends we see these as, "an opportunity in disguise, which has forced us to consider where we place our dollars."

"Our efforts in financial management have shown that we're needed," sums up Illinois Director Oschwald, "the challenge for us is coping with change."

Traveling To Oklahoma—By Satellite!

Jacqueline M. Ullery
Agricultural Information Officer
Oklahoma State University, Stillwater



People across the nation are attending Extension meetings in Oklahoma—though many of these persons have never visited the state. Whether in Oregon, New York, or next door to the Oklahoma State University (OSU) TV studios, they simply go to the nearest TV monitor connected to a downlink satellite dish.

The most obvious advantage with this new communications tool—satellite videoconferencing—is the saving of large amounts of time and dollars for travel, both for those giving programs and for those attending. Many different groups can be reached at one time; resource people are freed to do a variety of programs; and, once initial costs are met, there is a potential for cutting expenses in a variety of ways.

Exactly what is satellite videoconferencing? Gene Allen, production manager for the Extension satellite videoconferences at OSU, describes it simply as a communications tool. "It's particularly useful when visuals make a program better," he says, "and when widespread groups of people want to participate in that program."

Advantages

"It's cost effective. When using standard TV, you must appeal to extremely large audiences," Allen comments.

With its uplink facilities, OSU can bounce signals from satellites circling the earth. Allen says nearly 20 satellites patiently hover over North America alone, relaying television and radio programs, telephone calls, computer data, and even pocket-pager messages.

Downlink dishes perched in backyards throughout most of the continent can pick up OSU programs with a switch of a channel. Allen notes that five years ago no downlink dealers were in Oklahoma. Today, more than 40 dealers have stores in Oklahoma City and Tulsa alone.

Oklahoma Programs

So far, OSU has completed 12 satellite videoconferences including programs on horticulture, veterinary medicine, and agricultural economics. Many others are in the planning stages.

The first one, called the "Master Gardener," was a training session for volunteers throughout the state who answer phones and assist county agents with home gardening education. Ray Campbell and Paul Mitchell, both OSU Extension horticulturists, appeared both live and taped. Pre-taped sessions took the audience to actual sites for fruit tree planting and pruning.

Some 20 downlink dishes were rented or borrowed and placed at county offices or fairgrounds.

The
MASTER
GARDENE

Because satellite videoconferencing saves money on travel and expands program audiences, Oklahoma State University (OSU) employs it as a communications tool. Opposite Top: Uplink satellite dish sits outside OSU studio facilities. Below: OSU Extension Horticulturists Paul Mitchell (left) and Ray Campbell appear on "The Master Gardener," the first OSU satellite videoconference. Left: Pre taping session for a "vet med" satellite videoconference before viewing at 25 Oklahoma meeting sites.

Viewers called questions back to Campbell and Mitchell on-camera live at the OSU studios. The entire show is available now as taped teaching material.

Viewer comments about this new teaching method were extremely favorable.

Program For Vets

OSU Extension's second satellite videoconference was designed mainly for practicing veterinarians but also had a segment for cattle producers. This time, Tom Thedford, Extension veterinarian, coordinated portions done by himself and 12 other OSU veterinarians and horse specialists, most of whom had not had TV experience.

Thedford contacted vet schools all over the nation about viewing time and channel. He also offered the option for veterinarians to receive continuing education credit for viewing the show.

Encouraging Responses

"We know of people in another 25 states who watched," Thedford says. "Oregon had 65 to 70 viewers at one site. Arkansas taped it to show in 13 locations later. Roughly 25 Oklahoma meeting sites received it."

Recently, Thedford has spearheaded two more "vet med" videoconferences.

The subject of the third OSU Extension videoconference was on international agricultural trade and was designed for nationwide discussion. The broadcasted sessions included such noted economists and specialists as Clayton Yeutter, then of the Chicago Mercantile Exchange and now U.S. trade representative; Andrew Schmitz, University of California-Berkeley; D. Gale Johnson, University of Chicago; Ken Bader, American Soybean Association; and many others.

At the end of the broadcasted portion, Oklahoma commodity producers participated in a panel discussing local trade policy needs.

Impressive Outreach

Luther Tweeten, OSU agricultural economist, and Earl Brown, University of Maryland economist, worked together to coordinate plans for this conference. "I was especially impressed with the number of questions called in from many states;" Tweeten says.

The big advantage he names with this distance-learning information delivery, which he believes was a first for his profession, is that "we could reach a lot of people at low cost—it just provided an opportunity we couldn't have otherwise."

As might be expected, county agents played a big role in serving clients via this space-age method. Agents provided leadership and valuable personal contact at viewing sites. Initial county agent feedback has been generally favorable.

Grant Provided

The W. K. Kellogg Foundation, recognizing OSU's leadership in satellite videoconferencing and wishing to encourage the development of this technology, has provided a grant to OSU of $874,000, part of which will be used to establish a statewide network of downlinks, or sites at county Extension offices in Oklahoma where clients can participate in videoconferences.

"We'll find out that in some learning situations satellite videoconferencing will work well and in others it won't," says T. Roy Bogle, associate director of the Oklahoma Cooperative Extension Service. "We still need more exploration to peg the favorable situations. But with today's diminishing dollars we've got to deliver our message smarter, to more people."

Easier Banking For The Elderly

Beth E. Van Horn
Extension Home Economist
Blair County Extension Service
Hollidaysburg, Pennsylvania
and
Barbara W. Davis
Extension Specialist, Adult Development and Aging
The Pennsylvania State University, University Park

SMILE
FOR THE CAM
For Your Protection
This Transaction Is
Being Recorded
On Film

Senior citizens receive aid from bank employee (left) so they can use the bank's Automatic Teller Machine (ATM). Over 118 employees from central Pennsylvania banks recently participated in a course, offered by Pennsylvania Extension, to increase sensitivity and better service to older customers who are often baffled and confused by computerized banking and ATM's.

Photograph courtesy of William Carnahan, Extension Service, USDA (retired).

An old institution in every community is the neighborhood bank. One bank vice-president observed, "We've been around for years, but the customers who started with us many years ago are now part of America's aging population. I don't think we're providing them the service we could."

Pennsylvania Extension recently offered a course to help bank employees increase their sensitivity to the needs of older customers and provide better service. Over 118 employees from central Pennsylvania banks participated.

Beth Van Horn, Blair County Extension home economist, drew upon her previous work experience in a bank to help design and implement the program. Barbara Davis, Extension specialist in adult development and aging and co-designer of the program, provided the link between the research in aging and the need of bank employees to understand the older customer.

"Older persons are becoming a more important group of consumers," says Van Horn. "Banks are getting greater numbers of customers over the age of 65. Almost 26 percent of the consumer population is over 50 years of age. They are better educated and in better health than older adults of previous eras. These factors affect their choices as consumers."

Coping With Change

But older consumers must deal with rapid change in the banking industry. For example, more banks provide self-service. In the last several years, banks have installed Automatic Teller Machines (ATM's) in almost every community. The Extension program examines changes in banking practices made over the last several years.

Many bank employees take these practices for granted, but the older consumer is often baffled by computerized banking and ATM's. One teller commented, "I never realized how threatening and confusing today's banking can be."

Davis led the bank employees through a crash course in the aging process, emphasizing how aging influences older people. "Changes in a person's eyesight or hearing can make ordinary living difficult," says Davis, "but when such a person encounters a computerized bank statement, it can be confusing and impossible to understand."

Positive Feedback

Evaluations from participants indicated the course helped them become much more sensitive to the needs of the older customer and identify trouble spots in daily banking routines that could be adjusted to make banking more accessible to the aging population.

One teller, who works in a small rural bank, says, "I never realized how rushed I am and how I rush older people. This course made me aware of my problems and what I need to do to help make the older consumer feel more at home."

"If nothing else, this course will make me more patient when dealing with an older person," says a loan officer. "One elderly man I worked with today comes to mind. He just didn't seem to get what I was saying. The more he questioned me, the more impatient I became. Now, I realize he probably had difficulty hearing me over the background noise in our lobby."

According to Van Horn and Davis, banks are eager to improve their service to this growing segment of the population. By using the expertise of the Extension staff, banks in one area of Pennsylvania are beginning to do just that. The program is one more example of how Extension and private industry work together to improve peoples' lives.

High-Tech Career In Your Future?

Karen Pace
4-H Youth Program
Information Coordinator
Michigan State University,
East Lansing

A 4-H'er (seated) and a designer at Ford Motor Company, Michigan, employ computer graphics to create shapes of the future. Fifty five 4-H'ers participated in a program called "Your Future—A Better Idea," sponsored by the Michigan 4-H Youth Program and Ford Motor Company.

High technology, fast and frequent communication, increased mobility, a global economy, and increased competition for jobs characterize today's rapidly changing society. With so many high-tech career options available, how does a young person chart his or her future career path? Programs such as "Your Future—A Better Idea," sponsored by the Michigan 4-H Youth Program and Ford Motor Company, help Michigan 4-H members to explore high technology careers of the future.

"4-H is very committed to helping Michigan young people understand what it's going to take to enter the job market in the coming years and helping them prepare to enter that job market," says Leah Hoopfer, 4-H youth program leader. "The purpose of the 'Your Future—A Better Idea' workshop was for participants to explore firsthand high-tech careers in action."

Career Emphasis: Communication
High growth career areas were highlighted for the 55 participants, with repeated emphasis on computer and robotic systems development, communications and video technology, and the critical need for people with strong, basic communication and human relations skills.

"Robotization in the assembly plant is here to stay," says Ray Anderson, business planning associate in Ford's corporate strategy department. "Young people should focus on computer and robotic applications, not just computer programming," Anderson says. "Industry needs people who can further the development of robotic interaction on the assembly line. And there will be a high demand for those skilled people."

Technology And Understanding
"Technology is developing so rapidly that if we don't have a fundamental understanding of technology—if we can't manage that technology—we're not going to be able to survive," says Michigan State University President John DiBiaggio. "A person can't work on the assembly line today without understanding the basics of technology—being able to read and to use computer terminals, for instance."

Participants saw a variety of computer technology applications, from programming to robotics. The youth interacted one-on-one with adults employed in high-tech career areas, and explored "people skills training" in Ford's Human Resource Development Training Program. Many 4-H'ers especially enjoyed drawing cars on computers in the computer graphics training center. They visited an assembly plant and an automobile dealership and spent a morning with Ford staff members in the career areas of their choice. Throughout the three-day workshop, a two-person camera team was busy capturing the event on videotape.

During the grand finale luncheon, 4-H members were surprised with a music video of themselves in action.

"This linkage between Ford Motor Company and 4-H allows students to explore several career possibilities and look at themselves and decide where they might fit," DiBiaggio says. "This workshop should inspire them to prepare for college and to go to a university and do well while they're there."

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For Gardening Information: Dial U!

Mary Kay O'Hearn
Extension Communication Specialist
Communications Resources
University of Minnesota, St. Paul

Opposite Top: Dial U Coordinator Mark Ascerno and Extension Plant Pathology Supervisor Jill Pokorny microscopically examine an infested maple leaf . Dial U is the Minnesota Extension name for their phone-in service on home, yard, and garden care. Below: Lab technicians in phone cubicles answer calls in the Dial U Clinic at Alderman Hall, University of Minnesota. Far Right: Ad for Dial U that appears in the Yellow Pages of the Saint Paul, Minnesota, telephone directory. Above: Mary Flatten, Dial U Clinic laboratory technician, answers a consumer question dealing with insect pests of evergreens.

Photographs courtesy of Don Breneman, Communication Resources, University of Minnesota.

"Dial Who? Dial U!"

That's the slogan University of Minnesota Extension wants engraved in public memory for access to up-to-date information on insects and plants.

The slogan for this phone-in service has appeared on city bus waiting enclosures in both Twin Cities, Minneapolis and Saint Paul, as well as in ads in local magazines and newspapers.

When budget crunches faced Minnesota Extension, rather than shutting down phone-in clinics dispensing free information on home, yard, and garden care, Dial U evolved. The telephone teaching would continue, but at a fee of $2 per call automatically billed by the telephone company.

Extension recognized it would take time for the public to become accustomed to this change after years of free information.

"The first year—it was 1983 when the new service clicked in—phone calls dropped 90 percent," says Mark Ascerno, Extension entomologist at the University of Minnesota and Dial U coordinator. "We had 12,838 calls that year. But it has been increasing annually: 18,325 in 1984 and 21,580 in 1985."

The telephone answering technicians are graduate students and undergraduates. With staff supervision, they anwser the five Dial U incoming phone lines. The average call lasts 4 minutes. Free publications are mailed when appropriate.

Popular Queries

Phone lines are open weekdays during university hours. The Dial U clinic (a series of telephone cubicles) is actually Room 145, in Alderman Hall, the horticulture and landscape architecture building on the university's Saint Paul campus. Frequent queries concern wasps, carpenter ants, box-elder bugs, oak wilt, Dutch elm disease, lawn care, week control, and fertilizer.

The public recognizes they are receiving impartial information. "They know we aren't selling a service or pushing a product," Ascerno says. "That's another reason for having Dial U's listing and ad sandwiched between the pest control operation ads in the Yellow Pages in both cities' phonebooks."

Of the $2 charge for Dial U, the university keeps $1.63 and the phone company, 37 cents. Dial U may return a call with additional information or make a referral to another agency if the question can't be answered. "Other agencies refer callers to us, too," Ascerno says. "We don't intend to make a profit, but would like to recover costs. There is no charge if Dial U cannot answer the caller's question."

Dial U reports to Communication Resources, the education development unit. Richard Holloway, head of CR, and Ascerno work closely together on issues ranging from budget and personnel negotiations to talks with the phone company.

The answering technicians fill out a computer data entry card on every phone call to Dial U. Dial U access includes most of the seven-county metropolitan area and is available to more than half the state's 4.1 million population.

Database For Newsletter

The computer file has spillover advantages to Extension: Extension agents around the state can be alerted to insect outbreaks and ways to deal with them. Dial U is the current information database for Minnesota Extension's *Plant Pest Newsletter*—a delivery system to county Extension offices.

Dial U is excellent training for students in horticulture, entomology, and plant pathology. Entomology students who have worked in the phone call clinic almost uniformly claim they've learned more entomology there in one summer than in years of course work.

Ascerno sees Dial U as getting information to the public at the "teachable moment." In 1973, a combined University of Minnesota-University of Wisconsin study investigated the needs of home gardeners, and how they obtained gardening information. The data collected during this computerized study was the basis for the current operation of Dial U.

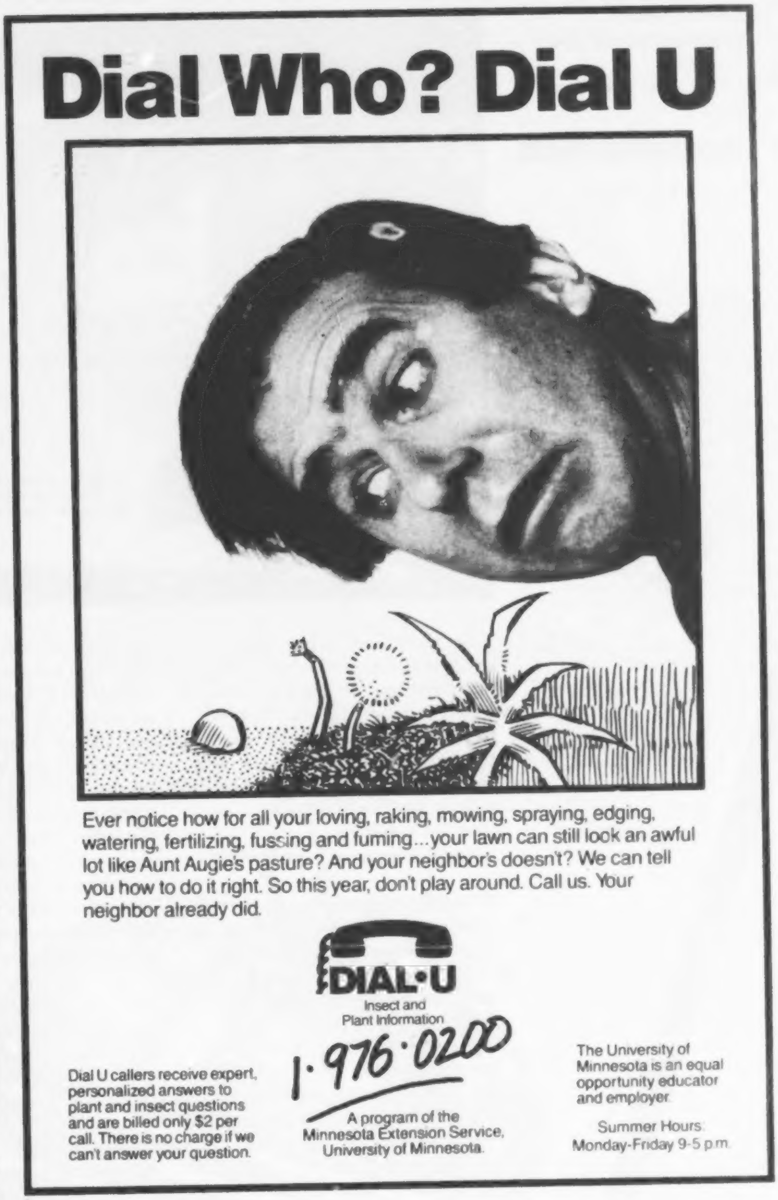
User Profile

A market study surveyed the prime users of Dial U and profiles them in the $30,000 to $45,000 income bracket. "We can't afford to advertise in Time and Newsweek and newspaper advertising is expensive," says Ascerno. "The budget is big from the University's viewpoint, but small from any other." The current (1985-86) Dial U budget is $193,000 with projected income $28,000 of that amount.

Cost Effective

Patrick J. Borich, Extension dean and director, believes Dial U frees county specialists to do more than answer telephones. "We believe Dial U is one method of meeting the demand for horticultural information without significantly requiring our metro agents and specialists to make major alterations in the way they spend their time," he says. "Dial U is a useful and cost-effective method to meet the demand and permits us to do other Extension programming as well."

Ascerno believes Minnesota is the only state currently operating a user-fee Dial U-type of operation. "We've had inquiries from universities in Michigan, Wisconsin, and California," he says.



Dial Who? Dial U

Ever notice how for all your loving, raking, mowing, spraying, edging, watering, fertilizing, fussing and fuming...your lawn can still look an awful lot like Aunt Augie's pasture? And your neighbor's doesn't? We can tell you how to do it right. So this year, don't play around. Call us. Your neighbor already did.

DIAL•U
Insect and
Plant Information
1·976·0200

Dial U callers receive expert, personalized answers to plant and insect questions and are billed only $2 per call. There is no charge if we can't answer your question.

A program of the
Minnesota Extension Service,
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The University of Minnesota is an equal opportunity educator and employer.

Summer Hours:
Monday-Friday 9-5 p.m.

Bi-Mart—
New Outlet For Extension Videos

Bruce L. Johnson
Extension Electronic Media Specialist
Oregon State University, Corvallis

Bi-Mart, a variety discount chain store in Oregon, recently marketed videocasettes by Oregon Extension on food preservation. This marketing experiment, by an Extension electronic media specialist at Oregon State University, motivated many viewers into trying food preservation. Extension is investigating ways to make video programs more responsive to client's needs.

FOOD FOR LATER...
FOOD PRESERVATION VIDEO
Video tape available at
ONE DAY NO-CHARGE RENTAL
from our Photo Department.

"The ubiquitous video cassette recorder (VCR) has become the heart and soul of home entertainment, turning America's family room into media central. . . No time to read? Buy a book on tape and watch it while you pay your bills or sew the buttons back on your kid's shirt."
—**Social Forecaster John Naisbitt**

If Naisbitt's observation is correct, what are we in Extension doing to ensure that people see our videotaped education messages? Sure, it's hard to compete with Robert Redford and Jane Fonda, but as we've learned from studying marketing in recent years, the task is not to reach everyone who has a VCR but to put appropriate video messages onto the VCR's of our defined audiences.

That's one motive for an experiment Electronic Media Specialist Bruce Johnson has conducted for over a year—marketing Oregon Extension videotapes through Bi-Mart, a variety discount chain store. Bi-Mart is a no-frills merchandiser that attracts low-income shoppers.

Going to Bi-Mart rather than a video speciality store had some advantages: (1) Video stores primarily are in the movie rental business and are still reluctant to offer educational programs, partly because of limited shelf space and partly because educational videos don't rent nearly as well as movies. (2) An Extension videotape in a video speciality store must compete for attention with the flashy packaging of the movie rentals, something Johnson didn't want to factor in for this test. (3) A store like Bi-Mart, on the other hand, has more shelf space and might be more interested in carrying a videotape that demonstrates products it sells.

Food Preservation Videos

Johnson approached Bi-Mart first about offering Extension's food preservation video series because he knew the store sold food preservation supplies. Bi-Mart managers and Johnson agreed to a limited test.

Extension staff provided two copies each of three food preservation programs for six Eugene area stores. In addition, Extension provided posters, shelf signs, and a list of relevant Extension publications. In exchange, Bi-Mart provided shelf space, employee time, and some newspaper advertising.

Posters placed in the video rental and food preservation areas of the stores advertised that Extension tapes were available on a 2-day non-charge basis.

To borrow the tapes, users showed a driver's license and wrote their names and addresses on a special list. They received a list of relevant Extension food preservation publications along with the tape.

Response Evaluated

The tapes remained in the stores for 4 months. Johnson then conducted a follow-up survey. Of 76 questionnaires mailed to users, 54 were returned. Responses indicated that users tended to be younger than the traditional Extension audience. Many were new to food preservation; seeing the videotapes encouraged them to try preserving. Most bought food preservation supplies at Bi-Mart as a result of watching the videotape.

All rated the tapes helpful and thought it a good idea to loan videotapes through Bi-Mart. The list of publications motivated users to obtain them from the local county office.

Johnson was only moderately pleased by the number of people that borrowed the tapes. Bi-Mart's newspaper advertising was minimal—only one ad at the beginning of the season mentioned the videotapes. Extension publicity attempts were limited to one news release. The in-store posters appeared the most effective means of advertising.

Subsequent Tests

In a second test with Bi-Mart, in late September 1985, Extension offered videotapes on home weatherization in all 33 stores. They were limited to the same advertising.

Results from this test were disappointing. The number of users was low. Bi-Mart employees explained that energy products were not the hot item they had been during the days of higher oil prices. Also, tapes probably should have been available in the stores sooner to take advantage of customer's early interest in weatherizing just after Labor Day.

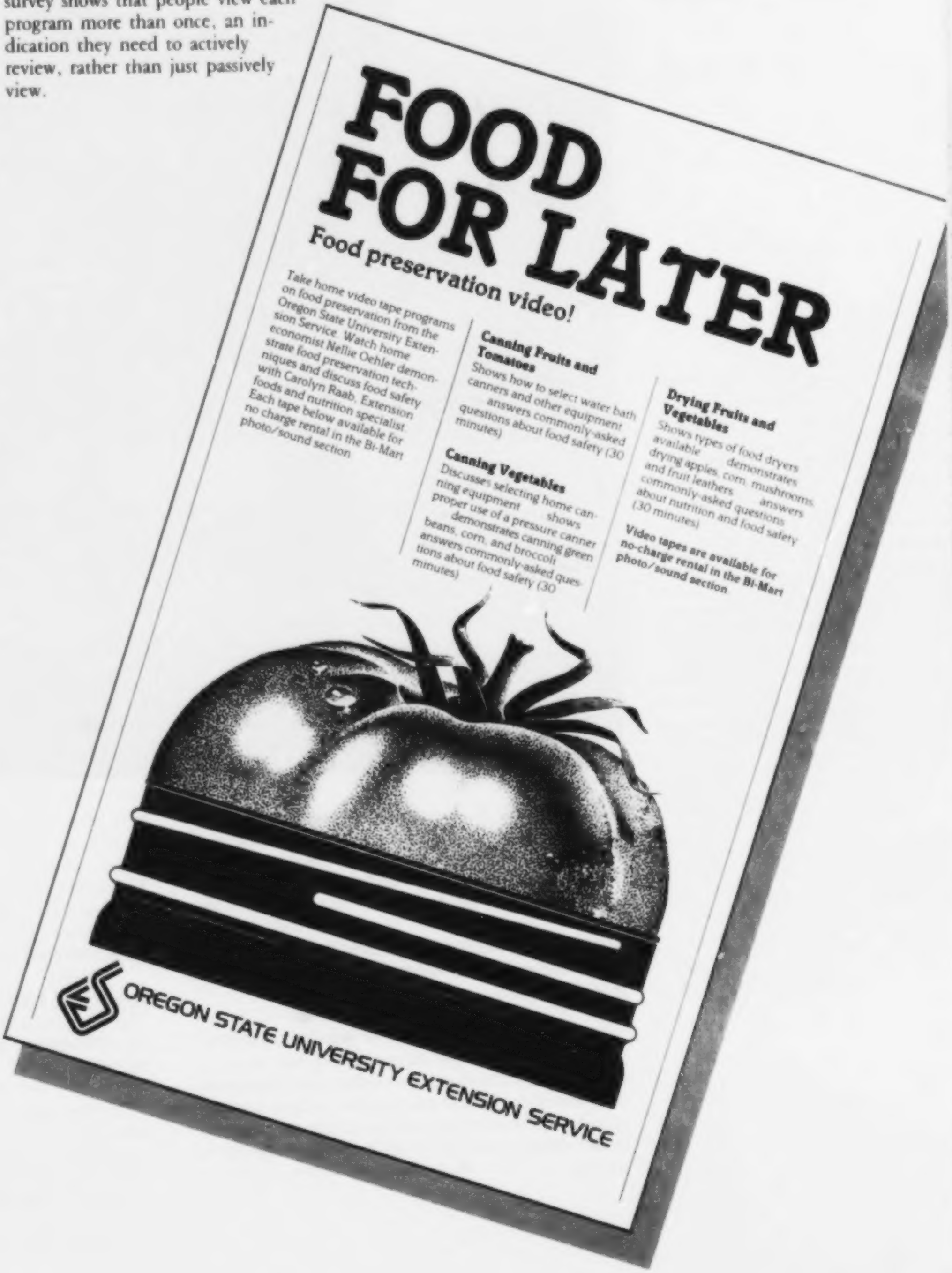
Currently, three programs on lawn and garden topics are in Bi-Mart stores. Early spot surveys indicate they are doing better than the other two program series. Johnson hopes to learn why through another user survey in a few months.

Future Efforts

Johnson continues efforts to reach clients with video programs and accompanying publications. He recently started working with public libraries around the state and with county offices.

Johnson believes Extension's educational videos have to be more interactive in the future. Naisbitt predicts, "Interactive video will bring the classroom to our living rooms, permitting us to upgrade our skills without interrupting our work life." The users survey shows that people view each program more than once, an indication they need to actively review, rather than just passively view.

When appropriate in future video programs, Johnson will include Level I Interactivity—planned pause and review points. This is one way Extension can make video programs more helpful and responsive to clients' needs.



FOOD FOR LATER

Food preservation video!

Take home video tape programs on food preservation from the Oregon State University Extension Service. Watch home economist Nellie Oehler demonstrate food preservation techniques and discuss food safety with Carolyn Raab, Extension foods and nutrition specialist. Each tape below available for no charge rental in the Bi-Mart photo/sound section

Canning Fruits and Tomatoes

Shows how to select water bath canners and other equipment answers commonly-asked questions about food safety (30 minutes)

Canning Vegetables

Discusses selecting home canning equipment shows proper use of a pressure canner demonstrates canning green beans, corn, and broccoli answers commonly-asked questions about food safety (30 minutes)

Drying Fruits and Vegetables

Shows types of food dryers available demonstrates drying apples, corn, mushrooms, and fruit leathers answers commonly-asked questions about nutrition and food safety (30 minutes)

Video tapes are available for no-charge rental in the Bi-Mart photo/sound section

OREGON STATE UNIVERSITY EXTENSION SERVICE

Staying Alive: Farm Aid For Nevada Ranchers

Alice M. Good
Communications
Coordinator
and
Dave H. Mathis (Retired)
Extension News Editor
University of Nevada, Reno

"Staying Alive" Project Leader Dave Lambert (left) advises Hal Curti, Washoe County Farm Bureau Vice president, at Curti's dairy farm south of Reno, Nevada. Nevada Cooperative Extension's "Staying Alive in '85" workshops were designed to help the state's farmers and ranchers acquire more knowledge in management techniques, lending practices, and marketing and packaging. The 1986 sessions of the workshops will be more problem oriented and personalized.

The spirit of Willie Nelson and company's Farm Aid concert is captured in Nevada Cooperative Extension's "Staying Alive in '85" workshops, designed to lend not money but a helping hand to the state's beleaguered food producers.

Rather than a Band-Aid approach, the program aims at possible major adjustments in the way ranchers think and operate.

"Ranchers may control assets of well over a million dollars; we want to get them thinking like business people," says Coordinator and Extension Economist Dave Lambert. "Successful business people keep good records. We want to help ranchers put their operations, whether cattle or alfalfa, on a businesslike footing."

It is particularly critical at this juncture in agricultural history, according to Lambert, when American producers are facing real competition from abroad. Unless this country's farmers and ranchers have organized their operations on sound business principles, they can't compete with cost-effective producers in other countries.

Developing Economic Analysts
The first round of workshops was developed to help Nevada's agriculturists become their own economic analysts.

"This first phase," says Lambert, "provided an overview of the tools that might be applied in their operations." Topics covered in the sessions held around the state in October and November of 1985 included: management techniques, recordkeeping and other financial tools, lending practices, marketing and packaging, and coping with stress.

"We've had good reaction from ranchers," says Douglas County Agent in Charge Wally Peterson, who reports nearly 50 attended the sessions held in Topaz.

"I particularly enjoyed the session on recordkeeping," says Douglas County rancher Dal Byington. "Out of about 45 ranchers present, only four were using computers. But the main thing is that ranchers need to stop thinking about cows and do more thinking about the business end of ranching, and how to utilize their assets."

Finding New Markets

Byington, president of the Nevada Cattlemen's Association and a member of the Ag College's Citizens Advisory Committee, was particularly interested in the possibility of exporting alfalfa to Japan.

According to speaker Ken Ohara of the Honda International Trading Company, there is a possibility that Nevada producers may improve their income picture by marketing hay and cattle to Japan.

"We want to help producers keep abreast of new developments in agriculture," says Lambert, "that will help them find new markets and new ways to promote their products. This can help keep them afloat until more profitable times."

Another goal of the "farm aid" workshops is to make farmers and ranchers more aware of what Cooperative Extension can do to help them on a daily basis.

Increasing Profitability

"Agriculture profitability according to reports," says Peterson, "is the number one priority of Extension here in the state and on a national basis. The 'Staying Alive' workshops are helping us help our clientele better."

Profitability—the bottom line—is the major problem facing producers. From comments heard at Tonopah and other workshops, ranchers don't want to get out of agriculture; they want to weather the current storm until times get better.

"Up to 20 percent of commercial producers in the United States are in serious difficulty," says Gordon Myer, agricultural economics department head, "with the worst hit being some of the 679,000 family farms with incomes ranging from $50,000 to $500,000. Almost a third of these family farms are suffering."

While it appears many of Nevada's farmers and ranchers are stable for the present, Myer suspects the percentage in trouble is close to the national average.

Factors Impacting Agriculture

Low farm income, high costs of doing business, declining land values, and rising interest rates, Myer explains, are major factors impacting agriculture. Farm incomes are below those of the '70s and operating costs are as high as they have ever been. Agricultural land values have declined 21 percent since 1981 and as high as 50 percent in some areas. Interest rates on agricultural loans have increased about 200 percent since 1975.

One rancher comments, "I sold a half million dollars' worth of cattle and never saw a penny of it—it all went to pay interest."

Myer believes, however, the tide will turn—it always has in the past.

Obtaining A Loan

Assisting the Ag College in presenting "Staying Alive" workshops is USDA's Farmers Home Administration staff. Distict Director Mike Holm reports that loan money is available but ranchers and farmers today have to convince the lender to invest in them. He advises producers to borrow only when absolutely necessary and then only when the loan will accrue benefits.

"Your biggest asset in obtaining a loan is a good set of records," Holm tells ranchers. "While the debt-to-asset ratio is the standard criterion for obtaining loans, cash flow and ability to service the debt are now equally if not more important."

Coping With Stress

"Stress on the farm" is another subject discussed during the sessions. According to Alice Crites, southern area home economics specialist, stress can increase the farmer's burden and fracture the family at a time when unity is most important.

While stress gears a person up to meet a challenge, prolonged stress can affect health, relationships with other people, and work. To combat stress, Crites advises seeking help by talking it out with others and escaping for awhile from the stressful situation.

Future Workshops

The next round of "Staying Alive," beginning in '86, will be more personalized.

"Sessions will be more hands-on and problem oriented," says Lambert. "Participants might work with computers and other methods to solve specific problems that come up in the workshops." Cooperative Extension's efforts will be diverse, allowing the right tools to address individual problems.

Personal assistance may be provided, using the University of Minnesota's FINPACK analysis program.

The overall goal of the program is not just to help ranchers hang on until prices improve, but rather to help them come out of their current difficult situation as better, more efficient business people. Willie and friends would be proud.

Excerpted from AgForum, the quarterly newsletter of the College of Agriculture, University of Nevada-Reno

Gardening Tabloids Go To Market

Randy C. Heatley
Extension Horticultural Agent
Jackson County, Michigan
and
Curt Peterson
Extension Horticultural Specialist
Department of Horticulture
Michigan State University, East Lansing

SELECTING ORNAMENTAL PLANTS
All About Bulbs
Gardening Techniques
All About Perennials
Greenhouses
Containers
All About Trees
Fruits & Berries

Michigan State University is taking an innovative marketing approach to publishing home horticultural bulletins.

Extension Bulletin E-1936, "Selecting Ornamental Plants," has been distributed in tabloid newspaper form to garden centers, nurseries, and other outlets. In a matter of weeks, nearly 150,000 copies of the publication have been printed and distributed.

"By using the retail centers, we get information out to the reader and promote Extension, as well as maintain a level of professionalism for the industry," says Curt Peterson, Extension horticultural specialist at Michigan State University. Peterson and Randy Heatley, Jackson County Extension horticultural agent, co-authored the bulletin, which adapted portions of information from Mississippi Cooperative Extension Publication 666. A revision is already being planned.

Peterson grew up in the nursery business. His parents own a retail garden center in Lakeland, Florida. "I had a first-hand business knowledge of how garden centers operate," he says. "The retailers like inexpensive handouts they can give to people to answer questions. The handouts help them to be more efficient and improve sales. It struck me that a tabloid would be an inexpensive way to distribute this information. I needed to get a county agent's perspective on the kinds of problems people were having."

Agent Input

To inject local expertise into the publication, Peterson approached Heatley, Extension horticultural agent. "Heatley knew the kind of problems people were having after fielding questions at the county level," Peterson says. "We decided to write a bulletin together that had simple language and was directed toward the public, not researchers."

Marketing strategies for the bulletin were planned well in advance. Large garden centers, such as Frank's Nurseries, were targeted for distribution and shown a preliminary rough. They agreed to a price and a delivery date.

A January state trade show was chosen as the perfect place to unveil the finished product to 500 garden center members. The bulletin and an order blank were mailed to all 4,000 state retailers with a note suggesting how they might use the bulletin to promote their businesses.

A customer in a garden center in Okemos, Michigan, examines a new Michigan State University tabloid: "Selecting Ornamental Plants." Michigan State University is now marketing home horticultural bulletins in tabloid newspaper form at garden centers, nurseries, and other outlets.

The bulletin was produced inexpensively as a 20-page newspaper tabloid. "The newspaper format," Peterson points out, "makes it easy to publish an annual revision by changing the features story and updating the copy."

Radio And TV PSAs

Thirty-second radio and TV PSAs are now being sent to all Michigan stations to promote the new bulletin. The PSAs employ professional actors and humor to carry their message. Customers are directed to the retail centers, and not the county offices to obtain the publication.

Tabloid bulletins (number's two and three) are now at the printer. They are: "Planting Ornamentals" and "Growing Perennials." Other titles being planned are: "Diagnosing Problems of Ornamental Landscape Plants;" "Roses For The Home;" "Fertilizing Garden Plants;" "Growing Herbs;" and "Growing Annuals And Bulbs."

"More people go to a garden center than to county offices," Peterson points out. "By using the retail centers to distribute these publications we ease the burden on the county offices." ⁂

An American Tragedy: Family Stress And Child Abuse

William H. Reid
Extension Family Life Specialist
Auburn University, Alabama

Change is not new to Extension. Extension is not only the product of change, Extension is a change agent. Recently Alabama Extension cooperated in offering a program that focused on both aspects of change: Extension adapting to a new situation and Extension acting as a change agent.

In 1981, the Alabama Department of Pensions and Security (DPS) received a federal grant to initiate a program to combat child abuse. Financial difficulties within the department necessitated a hiring freeze. DPS found itself in the position of having money to initiate a program but unable to hire personnel to implement it. They solved the problem by contracting with the Alabama Cooperative Extension Service to carry out the program.

Adjusting To Clients

Dorothy Tate, state leader in home economics, worked with DPS to draw up an agreement. "Our program involved having county agents teach parent education classes and train paraprofessionals to work under their supervision," says Tate. "Some county agents had experience in this. Others did not.

"The biggest change for agents was working with parents referred by DPS who were identified as abusive and neglectful," she adds. Although DPS agreed not to refer hardcore cases that involved sexual or substance abuse, many parents who were referred to Extension fit into this category.

Some county agents took on the new assignment with apprehension. Others were eager to participate in a new program. Peggy Harris, county agent in Cullman County, was enthusiastic. "This was a new venture for me, but I was ready for something different", she says.

Some county agents found the new assignment frustrating. Myra Barton of Mobile County says, "I was used to dealing with people who came to my programs because they wanted to learn. It was frustrating to try to teach people who resisted all attempts to help them. Most didn't want to be in the program and made their feelings clear."

Working in the program required county agents to change both their attitudes about child abusers and their methods of teaching and reaching clientele. The grant also required changes in attitudes toward working with other state agencies. DPS might say they were too busy to make referrals or they might ask the county agent or paraprofessional to testify in court.

Measuring Change

As county agents were themselves adjusting to change, they were also trying to induce change among their clientele. Many instruments were devised to measure change. Most, however, proved unusable. Clients had difficulty understanding the questionnaires. For example, a 10-item questionnaire was used to detect changes in levels of self-esteem. This instrument had been successfully used in a project with 12- to 14-year-old 4-H'ers, but it proved too complex for the current clientele.

Two methods successfully used, however, indicated clients had changed. The first method relied on perceptions of home life noted by paraprofessionals during weekly home visits. The paraprofessionals and social workers completed a checklist on their first visit to each home.

Checklist items measured physical needs of the child, family interactions, home environment, and attitudes of family members. Areas noted as weaknesses were the focus of subsequent weekly visits. An analysis of the data showed that clientele changed or improved in all of the areas studied.

The second method used to measure change was more exact—monitoring the number of repeated incidences of child abuse and neglect reported to DPS. As the program helped parents learn better discipline methods, handle stress more effectively, and have more realistic expectations toward their children, repeated incidences of child abuse diminished.

Classes and one-to-one instruction were used to teach parents skills in money management, food preparation, and basic homemaking. These also resulted in positive changes. Parents learned to provide the necessities for their children and were rarely reported again for child neglect.

National Recognition

Alabama's program efforts have received national recognition. Several states adopted the program and are using it to combat child abuse and neglect.

Alabama's experiences with the program illustrate that Extension must be ready to change and adapt to new situations as it attempts to change the behaviors and attitudes of others. ⁂

Multicounty Programming— A Viable Alternative

Everette M. Prosise
Extension District Program Leader,
Southeast District
North Carolina State University, Raleigh

One veteran livestock agent describes the recent North Carolina meeting for beef producers as one of the best he has ever attended. Producers who participated praise the quality of the field day.

The beef cattle production meeting—conceived with less than enthusiastic support and under conditions far from ideal—proved successful by every measure. What makes this particularly significant? For most Extension agents involved, the meeting was their first experience with multicounty programming (MCP).

Change Agents Change

In its conception and planning, the program turned the tables on the Extension change agents and made them the subject of change—an uncomfortable position for some agents who traditionally plan and control their own single-county programs.

Conditions clearly indicated that single-county beef production meetings were not feasible. Beef cattle prices were depressed, herds were smaller, and there were fewer producers in the row-crop-oriented Southeast Extension District of North Carolina, where beef is a secondary enterprise on nearly all farms that have cattle.

In a time of decreasing resources, expanding areas of need, and a decreasing number of clientele requesting assistance in certain areas, multicounty programming is becoming a viable alternative to the single-county approach.

North Carolina's Success

The success of North Carolina's field day, attended by five times the usual number of farmers, was a result of the willingness of agents to change and even make personal sacrifices in the interest of a quality educational program. They had to cross county lines themselves, encourage their producers to attend a meeting in another county, and, in the process, risk losing their own and their county's identity with the program.

With the potential for greater producer participation, MCP drew stronger support from state Extension specialists and private cooperators. These resources and the input county agents made after surveying producers for topics of interest and concern, assured a program that was responsive to needs and provided an experience for producers that sparked positive changes in beef cattle production in the area.

MCP—Not A Substitute

Although North Carolina's first experience with MCP was highly successful, this approach should not be used as a substitute for a strong single-county program where sufficient clientele exists to design effective educational opportunities and to do it efficiently. Seldom, if ever, should MCP be used where a single-county program is already successful or where there is sufficient need and resources to justify the single-county approach.

But MCP can strengthen the overall Extension educational program by providing additional opportunities for Extension clientele.

In addition, MCP can provide greater emphasis to nontraditional commodities and subjects; give agents an opportunity to share expertise, ideas, and concerns; and address regional problems on a regional basis.

Choosing MCP

In deciding whether or not MCP is appropriate for a particular situation, agents should address the following questions:

- Is the need and its solution compatible with the mission and scope of Extension?
- Does the objective of the MCP meet the needs of the clientele?
- Are sufficient resource persons available to address the need?
- Is sufficient time available to plan a MCP effort?
- Would the MCP effort enhance the overall county program?
- Would Extension's clientele be better off by having participated in the MCP effort?
- Is area support sufficient to ensure success of the MCP effort?
- If most of the answers to the above questions are "Yes," consider these additional points:

Multicounty programming is a two-way street. Each participating county provides resources and, in turn, benefits from the resources of the other counties.

Members of the Advisory Leadership System should be aware of the MCP effort and the potential increase in educational opportunities. District Program Leaders should be informed and, where appropriate, involved in the MCP process.

Multicounty programming requires more communication and coordination than county programming and more effort to attract audiences.

All counties, not just the host county, should be visible during the implementation stage.

A Successful Alternative

As North Carolina's meeting demonstrates, MCP can prove a successful alternative to the single-county approach.

Extension professionals who recognize the need for change and accept the responsibilities involved in effecting change can use MCP to enhance the overall educational program of the Extension system.

Think Regionally!

Jane Schuchardt
Extension Coordinator
and
Ronald Powers
Administrative Adviser
North Central Region
Educational Materials Project
Iowa State University, Ames

Save money!

Eliminate duplication!

Improve quality!

These phrases are indelibly etched in the minds of all Extension professionals. With mandatory change facing all of us, one small but positive avenue for weathering this period of shrinking budgets promises hope: the regional sharing of educational materials.

Regional sharing is not a new idea. Everyone is familiar with several states cooperating to develop, produce, and distribute Extension publications and audio visual materials. However, in this era of belt-tightening and grassroots accountability, many believe regional sharing is an idea whose time has come.

As one state specialist and author of a North Central Region (NCR) publication wrote recently, "It is no longer a convenient thing for us to cooperate on a regional level; it is a necessity."

NCREMP Project

Since 1976, a project to facilitate regional sharing has been in place in the North Central Region. If the North Central Regional Educational Materials Project (NCREMP) had a motto, it would be "think regionally!"

NCREMP's primary function is to encourage and facilitate development of regional educational materials on high-priority topics. To date, nearly 250 Extension educational materials have been assigned NCR numbers.

Once a state specialist, group of specialists or regional committee has a manuscript, story board, script or study packet and wishes to submit it for regional approval, the NCREMP does the rest.

Procedures

Two approval procedures are available—preliminary and final. First, an author is encouraged to ask for preliminary approval. In this procedure the proposed educational material is submitted to each of the 12 North Central states. Specialists are asked to review the resource and make constructive comments. The authors can revise and submit it for final approval if seven or more states indicate interest.

During the final approval stage, states are asked if they approve the resource as a regional and how many copies they wish to order. If seven states approve, it can become a North Central regional resource. On average, each of the approval procedures takes less than a month. Once an educational material has been approved as an NCR, the publishing state agrees to make it available within at least six months, sell copies to participating states at cost plus no more than 25 percent, and take out all specific state references. All participating states are listed on the resource as co-sponsors.

Throughout the regional sharing process, the NCREMP serves as the liaison between publishing and participating states. It does not maintain a central inventory of materials and is not involved in production. All orders are placed directly with the publishing state.

Savings Through Sharing

- *Regional sharing saves money.* Pooled orders from the entire region increase the quantity and lower the unit price. For example, one state in the region recently printed 23,000 copies of an NCR publication. The publishing state's part of the order was 3,000. Due to the increased number printed, the unit cost was 25 cents. The publishing state saved about $1,000.

Other benefits of regional sharing are:

- *Elimination of duplication.* Many topics are applicable regionally. A regional publication carries the names of the participating Extension Services, so the state identity isn't lost.

- *Improvement in quality.* The peer review process takes advantage of the broader range of expertise available in the region.

Other Services

The "think regionally!" motto directs other project services, too. The NCREMP maintains a bibliographic database of Extension educational materials produced and available from state Extension Services in the North Central Region. Currently the computerized data base has 8,000-plus entries. About 100 new entries are added monthly as reports come from states.

Specialists are encouraged to make use of the database in two ways. First, the database can be rapidly searched on a specified topic.

Before writing one sentence, an author who "thinks regionally" will first request a search to find out what's already available.

Most recent additions to the database are listed in a newsletter available to all Extension staff in the region. A second way to use the database is to monitor these updates.

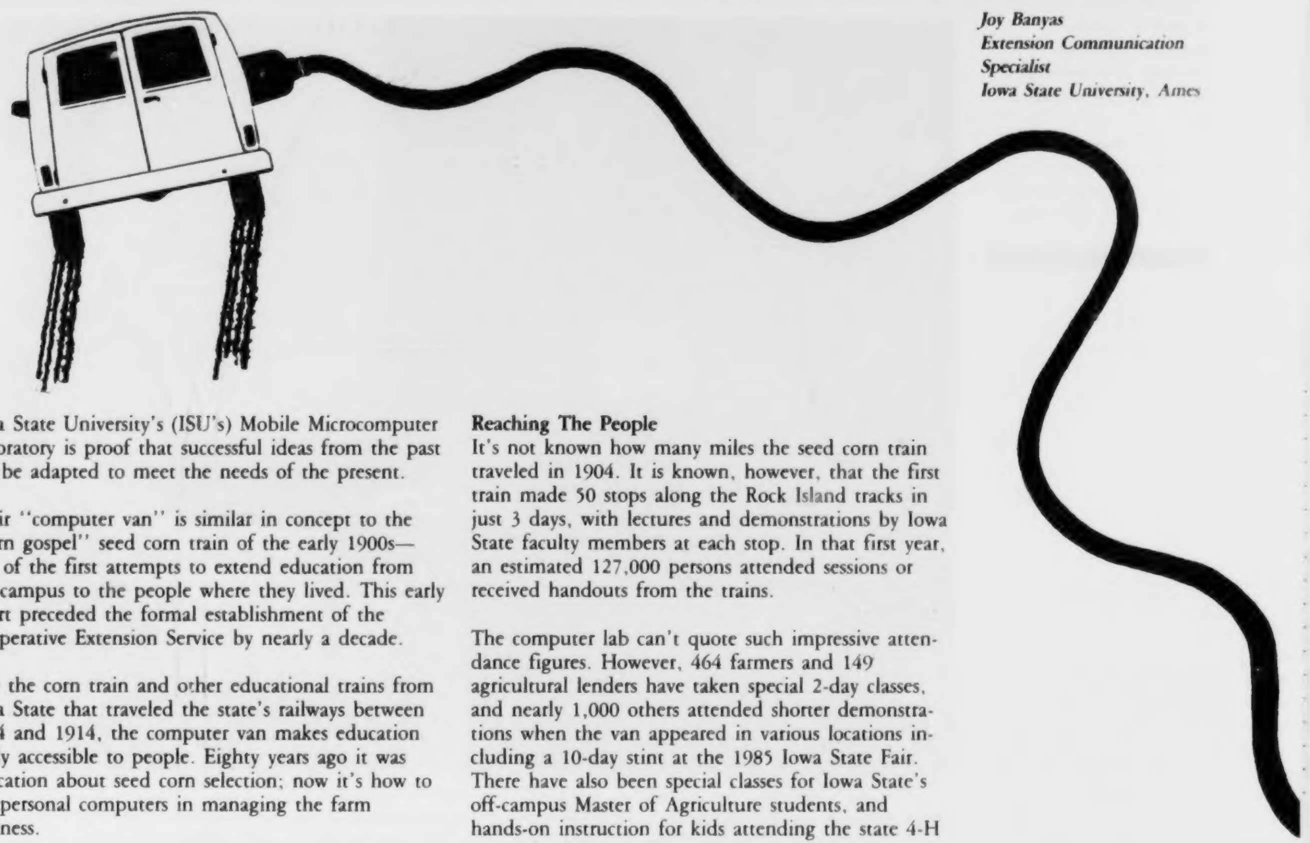
Charges

Professionals affiliated with the land-grant universities in the North Central Region are not charged for a database search or newsletter subscription. All other persons are charged $4 per search and $5 for a yearly subscription to the newsletter.

With budget cuts knocking on Extension's door, surely increased regional production and sharing of educational materials is the wave of the future. If Extension professionals continue to realize the benefits, and if a process is in place that easily allows it, the concept of regional sharing is here to stay.

Computer Education Goes On The Road

Joy Banyas
Extension Communication Specialist
Iowa State University, Ames



Iowa State University's (ISU's) Mobile Microcomputer Laboratory is proof that successful ideas from the past can be adapted to meet the needs of the present.

Their "computer van" is similar in concept to the "corn gospel" seed corn train of the early 1900s—one of the first attempts to extend education from the campus to the people where they lived. This early effort preceded the formal establishment of the Cooperative Extension Service by nearly a decade.

Like the corn train and other educational trains from Iowa State that traveled the state's railways between 1904 and 1914, the computer van makes education easily accessible to people. Eighty years ago it was education about seed corn selection; now it's how to use personal computers in managing the farm business.

Computer Instruction Provided

The computer van is a customized 28-foot recreational vehicle jointly sponsored by ISU's College of Agriculture and University Extension Service. It took to the road in January 1985 logging 19,980 miles in its first 16 months and delivering computer instruction classes to farmers, agribusinesspersons, students, and others in every part of the state.

County and area offices of the ISU Cooperative Extension Service make arrangements for local classes and appearances.

The corn trains were equipped with the latest in seed corn technology: sawdust-filled wooden boxes where seed corn sprouted, speaker platforms, and roll-down, hand-drawn charts.

The mobile lab also has up-to-date technology: $42,000 in microcomputer equipment ("micros" from Texas Instruments; Apple—II, IIc, and Macintosh; IBM PC; Zenith; and Hewlett-Packard, plus printers and several kinds of software for each). The air-conditioned van has custom-built work stations, speakers, and a security system.

ISU staff member Lyle Stewart and his assistant, Gary Stasko, drive the van, maintain the equipment, pack and unpack at every stop, and teach the classes as well.

Reaching The People

It's not known how many miles the seed corn train traveled in 1904. It is known, however, that the first train made 50 stops along the Rock Island tracks in just 3 days, with lectures and demonstrations by Iowa State faculty members at each stop. In that first year, an estimated 127,000 persons attended sessions or received handouts from the trains.

The computer lab can't quote such impressive attendance figures. However, 464 farmers and 149 agricultural lenders have taken special 2-day classes, and nearly 1,000 others attended shorter demonstrations when the van appeared in various locations including a 10-day stint at the 1985 Iowa State Fair. There have also been special classes for Iowa State's off-campus Master of Agriculture students, and hands-on instruction for kids attending the state 4-H camps in the summer.

Harold Crawford, ISU assistant dean of agriculture who oversees the project, says the van's travel plans ensure that, at one time or another, a class will be held within a 60-mile driving distance of every Iowan—even those living in the far corners of the state.

Response To Need

Iowa State is one of the first universities, if not the first, to operate a nonprofit educational mobile microcomputer laboratory for agriculturists.

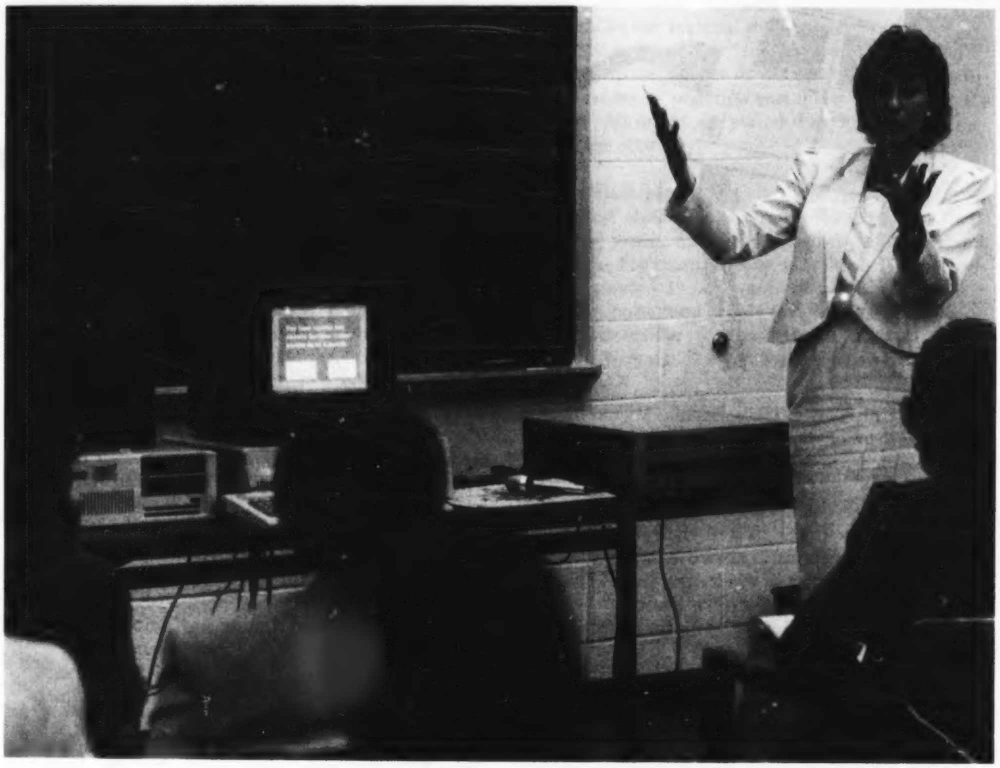
The seed corn train was a first too—a response to hard economic times when farmers needed quick, reliable information on seed corn selection.

Now reliable information is needed on economical management practices—information that is available quickly through use of specialized microcomputer programs.

Like the "corn gospel" train, the ISU computer van is one way the university can extend its informational impact to help farmers and others learn what is available and how to use it to their advantage.

Interactive Information

Michael T. Lambur
Extension Specialist,
Planning, Evaluation, and
Professional Development
and
James F. Johnson
Extension Assistant
Director, Support Systems
Virginia Tech, Blacksburg



For "single individual" controlled learning situations, the interactive videodisc can respond to questions with action visuals, still visuals, and text. It allows potential learners to get needed information at their convenience.

A new technology that has merit for bringing Extension into the information age is the interactive videodisc. The interactive videodisc combines high-resolution video images produced by a videodisc player with the powerful processing capabilities of the microcomputer.

The result is an information system that can respond to questions with action visuals, still visuals, and text.

With dwindling budgets and cutbacks in staffing, the interactive videodisc could be used to more efficiently handle some of the routine instructional tasks in Extension. While not a replacement for the professional, it might be used to supplement instruction on relatively static topics (fertilizing shrubs, canning, pesticide applicator training, taking a soil sample), leaving the Extension staff member to concentrate on other more dynamic topics (pesticide recommendations).

In addition, interactive videodisc systems are always ready to teach. The potential learners need not wait for the next "class," but can see needed information at their convenience.

Extending Service Base

"Stand alone" interactive videodisc systems can also be used to broaden Extension's service base by placement in areas of high public accesss such as libraries and shopping malls. They can even be used in prisons, courthouses, and training centers for the handicapped. And, they can extend service hours beyond the traditional duty hours.

The interactive videodisc system also has the potential for modeling the outstanding Extension specialist's problem solving process. Through artificial intelligence or *expert systems,* operating within the interactive video system, the way a specialist "thinks through" solving a problem can essentially be modeled and replicated for use on this system in various sites at the same time.

This represents a unique way of permitting specialists, and other Extension staff, to have a more significant impact on a larger number of people than would be possible with individual visits.

Certification Training Aid

The Office of Pesticide Programs at Virginia Tech is currently developing an interactive videodisc program to use as a training aid for people wishing to become certified or recertified as private or commercial pesticide applicators.

The videodisc program is not intended to be a replacement for the certification exam or the Pesticide Certification Training Manual. Rather, it is intended to enhance the current training program and make it more interesting and effective.

Fourteen modules will be included in the program dealing with such topics as pest identification, safety, and alternatives to pesticides. To provide an optimum opportunity for learning, the user will be able to control the speed of the presentation, and have the option of moving backward or forward in the module through a touch-sensitive screen. Decisionmaking points will be presented to the user in the same chronological order as he or she would encounter them in real life.

The user will have the advantage of receiving immediate feedback and reinforcement of the learned concepts. If a user's knowledge is insufficient to make a required decision, the user can return to the module to review a topic. At the end of the module, the user will be prompted to areas of weakness or strength based on responses to questions during the exercise.

High Potential

The diversity of information that these systems are capable of offering also has implications for speeding the adoption of new ideas and practices. These systems provide the notification and general information most important during the awareness and interest stages of the individual adoption process. Through the system's ability to produce more specific information it can also fulfill some of the information needs during the trial stage.

While more development and testing of the interactive videodisc technology is needed, initial feedback indicates that it has much potential for Extension. It uniquely combines two technologies with which most people are familiar.

For interactive videodisc systems to be successful, however, care must be taken when selecting subject matter for application using this technology and choosing the setting in which the system is actually used.

For example, only information that has a long "shelf life" (2 to 8 years) should be included on a disc, which is relatively permanent once it is made. Information that will likely change more frequently can be included on the computer part of the system, which is easily updated. And, while interactive videodisc can be a good supplement or replacement for one-on-one instruction, it does not work well in group settings. It is primarily a "single individual" learning situation.

Farm Decisions . . . Texas-Style

Specialists and county agents of the Texas Agricultural Extension Service are helping farmers and ranchers make crucial decisions which may mean survival or failure for many through the use of Extension computers.

Since the Texas Agricultural Extension Service began its computer pilot program in September 1983, more than 140 microcomputers have been installed in county, district, and campus offices, Michael Gerst, Extension computer specialist at Lubbock points out. "The ultimate goal," he says, "is to provide computer capability in all Extension units." Texas has 254 counties.

In Paducah County, a cotton farmer found he was losing $13 an acre on his crop. Using a software program developed by his county agent and Extension livestock and agronomy specialists, the farmer switched part of his effort to a cow-calf operation for better economic prospects this year.

In Lubbock County, a producer compared production costs and receipts between cotton and grain sorghum. The analysis by the Extension office computer helped him decide to put more acreage into grain sorghum this year.

In Castro County, as the sign-up date for the federal Conservation Reserve program approached, 150 farmers ran their individual checksheets on the Extension office computer in two days to help them decide on program participation.

Texas Agricultural Extension offers farmers, ranchers, and homemakers some 40 software programs to assist their decisionmaking, Michael Gerst notes. "Much of the software can be used on the farmers' own computers as well," he says.

Producer use of the Cottle County computer has increased greatly in recent weeks as it helps producers reach decisions on the new farm programs and other crucial issues. At Lubbock, county agents designed budgets which would allow a producer to see his profit or loss per acre and the market price needed to break even on given production levels. Users call the program "super user friendly."

County agents claim that the computer programs have helped Lubbock County producers make production and marketing decisions and assisted landlords and tenants in negotiating their sharing ratios.

"This is a good tool, if people will learn to believe it," says Cottle County Producer Joe Don Brooks. Brooks learned to believe, he says, after it helped him project a recent cattle sale which differed only $400 from the computer projection. □

Extracted from Computer Topics, *Southeastern Region Newsletter, The University of Georgia, Athens.*

Yields Up In A Dry Season

William J. Lamont, Jr.
Extension Vegetable Specialist
North Carolina State University, Raleigh

Photograph courtesy of the Soil Conservation Service, USDA.

An innovative vegetable production system featuring trickle irrigation which cuts water use in half is increasing North Carolina vegetable yields.

The system, promoted by Extension vegetable specialists at North Carolina State University, employs on-farm demonstrations to bring growers and county agents an intensive vegetable production technology package.

The package consists of plastic mulch film, trickle irrigation, and, if required, fumigation; containerized transplants are also utilized.

"Trickle irrigation can use two water sources," says Bill Lamont, Extension Vegetable Specialist, North Carolina State University, and a system researcher who has established on-farm demonstrations. "The sources, Lamont says, "are either a farm pond or a well—each requiring different filtering equipment."

When Lamont first arrived in North Carolina, approximately 50 acres of vegetables were grown on plastic mulch. "I could see such a potential for growth in this area if we only had portable pumping and filtration equipment," he comments. "This would enable us to go to a grower's farm and demonstrate the complete intensive vegetable production package using the grower's farm pond or well as a water source."

With the assistance of a local irrigation company, appropriate machinery was developed which has provided dynamic on-farm demonstration capacity to county Extension personnel.

Increase Predicted

There are 900 acres of drip irrigation in the state now, Lamont points out. "I think that you are going to see a dramatic increase in acreage in the coming years," he says. Cost of installing the system is about $600 an acre including the fumigant sprayed on the soil to kill soil fungi.

Lonnie Thomas, one of the new breed of vegetable producers who is using the intensive vegetable production technology that was demonstrated at his farm in 1985, is a believer in the system. "The demonstration last year really opened my eyes to the increased yields and quality of vegatables that can be produced on 5 acres of land," Thomas says. Thomas saw a demonstration of the concept of double-cropping with the plastic mulch.

Water Usage Reduced
"I couldn't believe how the trickle irrigation reduced my water usage," he says.

"Billy and John Carter, vegetable growers from Eagle Springs, could not produce the volume and quality of vegetables they do, if they did not use the intensive vegetable package," says Bill Reece, county Extension chairman, Montgomery County. The Carters had a demonstration package in 1984 and built their own pumping-filtering unit for use in 1985.

Sold On The System
"We will never go back to conventional farming," says Billy Carter. "Demonstrating how our farm pond could be used for trickle irrigation really impressed us and we are sold on the system," says John Carter.

In the dry season of 1986, Orange County grower J. Howard Pope had already lost half his wheat and corn crop to the drought, but his plastic mulch/trickle irrigation demonstration will probably turn a profit. "I didn't think so when I started, but it will be one of the few things I make any money on this year," Pope says.

Increasing Yields
"It is phenomenal how much you can grow per square foot," says Jim Monroe, county Extension agent, Orange County "It has been our experience that growers can double or triple their yields over bare-ground farming."

J. Hoyt Wright grew a 1/8-acre test plot last year and expanded to 1-1/4 acres of cantaloupes this year. Wright believes the trickle irrigation had made all the difference during the drought this summer. "I wouldn't have had anything without it," he says.

The intensive vegetable production demonstration has been a great teaching tool for the county personnel who use it for "twilight grower meetings" and a subject for extensive TV and newspaper coverage, Lamont points out.

The continued use of this demonstration equipment, either a small PVC hookup for well water, or the portable pumping and filtering unit for farm ponds, will continue to provide the North Carolina Extension Service with a progressive image, Lamont believes. "Growers are finding out what 4 to 6 acres of land and a good well or farm pond can produce profitably, if managed intensively," he states.

Y.E.S. For Youth Energy Education

Julia Graddy
Educational Media Coordinator
IFAS Information
Institute of Food and Agricultural Sciences
University of Florida, Gainesville

When Jermaine Aldred sat at a computer at Florida Power and Light Utility Company in Broward County, the 14-year-old wasn't considering the words "networking" or "community change agents" as he puzzled out the energy load of a Broward County Boy's Club. Instead, with a utility engineer at his shoulder, he sat engrossed in the complex task, plugging in data which 8 weeks ago had been a complete mystery to him.

Jermaine knew the results of his survey and those conducted by nine other Project Y.E.S. (Youth Energy Service) participants might be able to save their 20 United Way agency clients as much as $25,000 in 1986. Even more than that, however, Jermaine and his colleagues have received valuable energy training and a rare 8-week glimpse of the world of energy professionals. The teenagers have learned valuable life and career skills which will give them a competitive edge throughout high school and college.

Jermaine, a teenager from urban Broward County, is the beneficiary of a changing type of Extension programming: intensive networking between public and private agencies. During Project Y.E.S. Extension played the roles of facilitator, sponsor, coordinator, and identifier of key community change agents.

"This type of programming reflects the changing role of Extension and the changing needs of the urban communities we serve," says Energy Organizer and Coordinator Sandra Brubaker, a Florida Extension Service agent of Broward County, the state's most populous area. "It represents the type of programming that Extension is going to be doing a lot more of if we want to survive and effectively serve our urban clients."

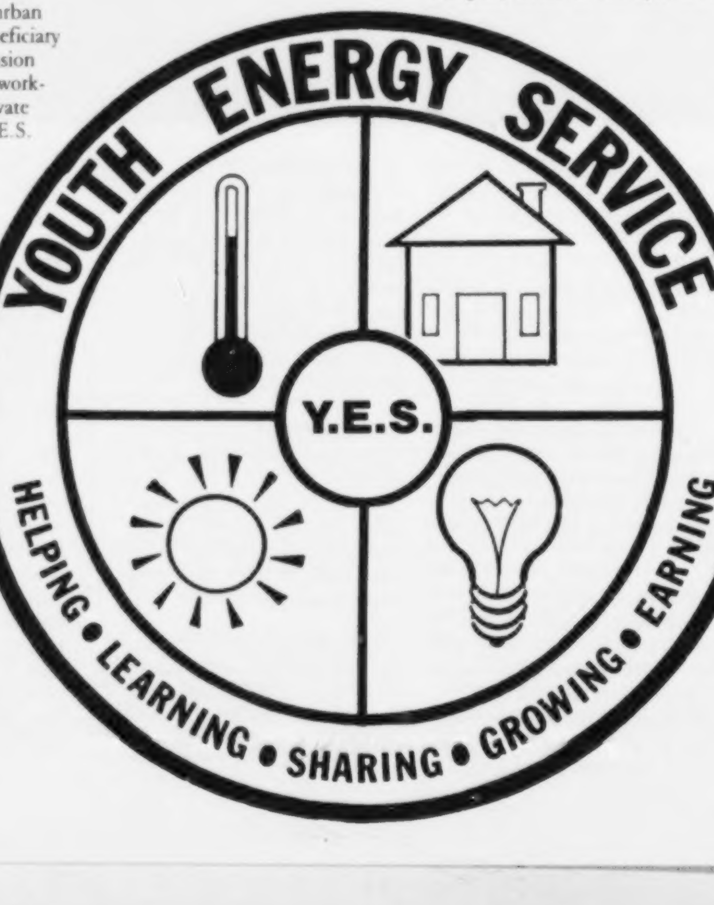
Extension A Sponsor

Project Y.E.S. brought together some seemingly unconnected community and youth needs. First, Brubaker's work with another energy program revealed that because of long utility company backorders, United Way agencies were waiting as long as 3 years to receive energy audits.

Next, she was aware that teenagers began dropping out of the youth-building club as pressures for earning summer money increased.

The project's catalyst was the federally funded Broward Employment and Training Administration (BETA). BETA had money available for summer youth employment if another agency, such as Extension, would act as sponsor. Brubaker designed the program, then mailed program flyers to high schools, which in turn referred 10 academically promising students to Project Y.E.S. Five came from economically disadvantaged backgrounds. The Broward County Mass Transit Department donated 10 8-week bus passes. Nova University allowed the students to use school computers once a week to set up their energy data.

The key player, however, was Florida Power and Light (FPL). The company donated about $500 worth of materials and provided engineers to train the students, accompany them on surveys, and


YOUTH ENERGY SERVICE
Y.E.S.
HELPING • LEARNING • SHARING • GROWING • EARNING

Teenager John Spohn of Broward County, Florida, checks out an icicle found in an ice storage tank that is part of an air-conditioning system. Spohn was one of the Youth Energy Service participants who worked with specialists at a power and light utility company in Broward County. He and others received comprehensive energy training because of a program sponsored and coordinated by Extension.

Photograph courtesy of the Miami Herald.

help them prepare reports to present to the United Way agencies they surveyed. Brubaker credits the head of FPL with providing the kind of "key community change agent" support needed to spearhead the effort.

"The personnel there have acted as mentors for the teenagers. They've been important role models," says Brubaker.

Energy Training

The teens received 30 hours of comprehensive energy training from FPL professionals, including sales and marketing techniques. They learned the mechanics of air-conditioning systems, how to conduct energy audits, and how to break down the use load for each electrical component used in buildings. They were taught how to listen to a customer and how to write and present an energy report.

But the training went beyond energy education. Extension professionals taught teamwork skills and image building and helped them design a training manual for the course. A psychologist gave tips on job search and interviewing skills. Another Broward County agent presented a "Dress for Action" seminar.

During the 8 weeks, the teenagers earned $3.35 an hour. Four teams surveyed United Way agencies with FPL engineers, preparing energy reports on FPL and Nova University computers.

The group also toured several area facilities that use a variety of systems to generate electricity.

"We wanted to expose these youth—some of whom wouldn't have had the opportunity otherwise—to the wide possibilities of pursuing a career in energy," says Brubaker.

Next year, Brubaker hopes the program will double in size. She says, however, that she'll need help to coordinate appointments and transportation for the group, and she hopes to intersperse the initial training with field experience so the teenagers can immediately understand how to apply the theory they learn.

Positive Impact

"We've already proven that programs like this can conserve energy and have a tremendous positive economic impact for nonprofit agencies. It's also created good visibility for 4-H and Extension in an urban setting. Project Y.E.S. will track the academic careers of these first students to see if project participation helps them in school," she adds.

Project Y.E.S. cast Florida Extension's energy program in the role of urban facilitator for youth, a coordinator and targeter of community change agents. The program capitalizes on the strengths of several community organizations while filling real community needs.

Finally, Project Y.E.S. teaches new skills to promising teenagers and instills 4-H values as it helps them earn summer spending money. ♣

Changing With The Times: Homemakers Keep Pace

Thomas A. Merrill
Extension Assistant
Specialist, Communications
Louisiana State University,
Baton Rouge

Fifty years ago, Alberta Fox was concerned with food preservation, nutrition, and other typical worries of the homemaker of that time, so she joined a home demonstration club to gain knowledge in those areas.

Today, Fox is experienced in those areas, but she is concerned about such financial issues as budgeting and insurance. And the 74-year-old Sulphur, Louisiana, homemaker still is turning to the Cooperative Extension Service for help.

"The organizations that once were known as home demonstration clubs have evolved into Extension Homemakers Clubs; the issue on which they concentrate have changed to meet the needs of today's homemakers," says Denver Loupe, director of the Louisiana Cooperative Extension Service and vice-chancellor of the Louisiana State University Agricultural Center.

"The clubs are just part of Extension's overall home economics program designed to improve the family life of people throughout the state," he explains.

Emphasis Expanded

The basic issues of cooking and clothing construction still are evident in educational programs, but they are accompanied by such issues as handling family finances and using time management techniques to balance a career outside the home with the activities of homemaking.

"I think the sessions we have today about handling finances are very beneficial—especially for women who often have left those things up to their husbands," says Fox. "They certainly make it a lot easier when you have to face it alone."

Fox first joined a homemakers club in 1936 when she lived in Oklahoma. She later joined a club sponsored by the Louisiana Extension Service after moving to Calcasieu Parish in 1942.

"In those first years, we concentrated on food preservation and nutrition," Fox says. "Now we have a wide range of programs geared to the issues of today."

Educating People

"Our basic purpose remains the same; we are trying to educate people," says Loupe, "What we are trying to do, just as we have in the past, is to provide families with practical skills and concepts to improve their lives and the lives of their families."

Extension Homemakers Councils apparently are achieving that goal since membership in Louisiana has grown to more than 15,000 people in 671 clubs. Members of those groups are pleased with the activities.

"Cooperative Extension is an excellent resource," says Shreveporter Maureen Grubb. "It provides you with a great means of tapping all sorts of information."

Grubb had attempted to set up a budget but could not find anyone to aid in that quest until she learned of Extension Service programs that help with family financial planning. Likewise, Virgie Foreman of Vermilion Parish credits Extension Service programs with aiding in her family's financial success.

NUTRITION INFORMATION
Per Serving
$
LOUISIANA COOPERATIVE EXTENSION HOMEMAKERS COUNCIL
EXTENSION SERVICE
HOME FAMILY COMMUNITY
E.H.

"The Extension program on how to operate and manage a farm really helped us," says Foreman, who is president of the Louisiana Extension Homemakers Council. "If our farms have been successful, it has been because of the research and information we have received from our Extension office."

New Skills Needed

"A lot of the problems today are that families don't know how to conserve their resources and how to set priorities," continues Foreman. "Those are the first things they need to learn."

Anne Buker of Gonzales agrees with that logic, saying time and money management have become increasingly important to her in recent years.

"I am working more now because it's a matter of economics," says the 45-year-old, who has been married 24 years. "What I need to know today is more about money management and basic nutrition, rather than how to can vegetables."

Although working interferes with the number of homemakers club meetings Buker can attend, she says the topics addressed at those meetings are moving in a direction consistent with the needs of today's homemakers.

Agreeing with the other women, 43-year-old Jessie Hendrix of Forest says aid with economic issues is the most critical aspect of her involvement in Extension homemakers.

"Right now I am having financial problems," says Hendrix, a mother of five who explains she currently has to work part time. "The club programs are showing me how to budget and handle my finances."

Addressing current issues isn't the only good thing to come from homemakers councils, according to Hendrix.

"I am everything that I am because of my involvement in homemakers clubs," she says. "I joined when I was about 3 years into my marriage, and I learned how to cook and sew when homemaking consisted of doing just that.

"Now I'm learning how to do other things that homemakers must do today."

4-H Links The Generations Again

Joseph A. Weber
Human Development Specialist
Department of Family Relations and Child Development
and
Carla Chlouber
Publications Editor
Department of Agricultural Information
Oklahoma State University, Stillwater

Recent changes in society and family life have frequently disrupted the close relationships that once existed between older adults and youth. But Oklahoma 4-H is helping re-establish and support this vital connection between generations through a special interest project—"Stepping Into the Past."

Several generations ago families lived closer together; older adults were an important part of family life. Grandparents often shared in the experience of childrearing. Young people felt they were a part of their grandparents' lives and were deeply affected by their loving care and attention. Children also saw aging as a natural part of the life cycle.

Today, family members are often separated from their grandparents and other elderly relatives by distance or divorce. In addition, social attitudes are slowly eroding the values that in previous generations strengthened relationships between the young and older adults. There seems to be a societal myth that the young and the elderly do not really need each other.

Renewing Strong Bonds

Through "Stepping Into the Past," 4-H'ers have formed stronger bonds with the older generation, and, along with the closer ties, they're gaining valuable knowledge about what it took to survive—and thrive—in the state's early days.

A young person may chose for this project his or her grandparents, a neighbor, or someone from church. A major portion of the project involves frequent visits (at least 10) between the young person and an older adult. During each visit, the two talk about a specific topic and choose activities that promote an important idea or skill.

By becoming involved in the program, young people can acquire a positive image of older adults and greater self-confidence in themselves. Older adults will be able to take pride in their important role as educators and find personal satisfaction in strengthening their relationship with the younger generation.

Through the "Stepping Into The Past" program, Oklahoma 4-H hopes to re-establish the vital connection between the generations. Over 300 4-H members have participated in this state's 4-H Personal Development Project during the last 3 years. Opposite: Willie Unsell and his grandparents share memories through a "Grandscrapbook," a log of activities and comments of visits with them. Left: Tanya Lewis (left) enjoys her grandmother's descriptions of photographs in an old album.

Spinoff Project

"Stepping Into the Past" is a spinoff of Oklahoma's 4-H Personal Development Project. During the last 3 years over 300 4-H members have participated. The present project was introduced in the fall of 1985 to reach nontraditional youth audiences and expand the potential of the Personal Development Project.

Initial results indicate that Oklahoma 4-H'ers are enthusiastic about this special way of learning about the past.

Keys To The Program

The Grandstory and Grandscrapbook are key elements in the program because they serve as a record of the young person's visits and experiences.

The Grandscrapbook is a log of activities, events, discussions, and personal comments reflecting the young person's visits with the older adult friend.

The Grandstory, on the other hand, is a written story about a particular topic, such as schooling, work, entertainment, family times, or 4-H experiences, that the older person shares with the 4-H member.

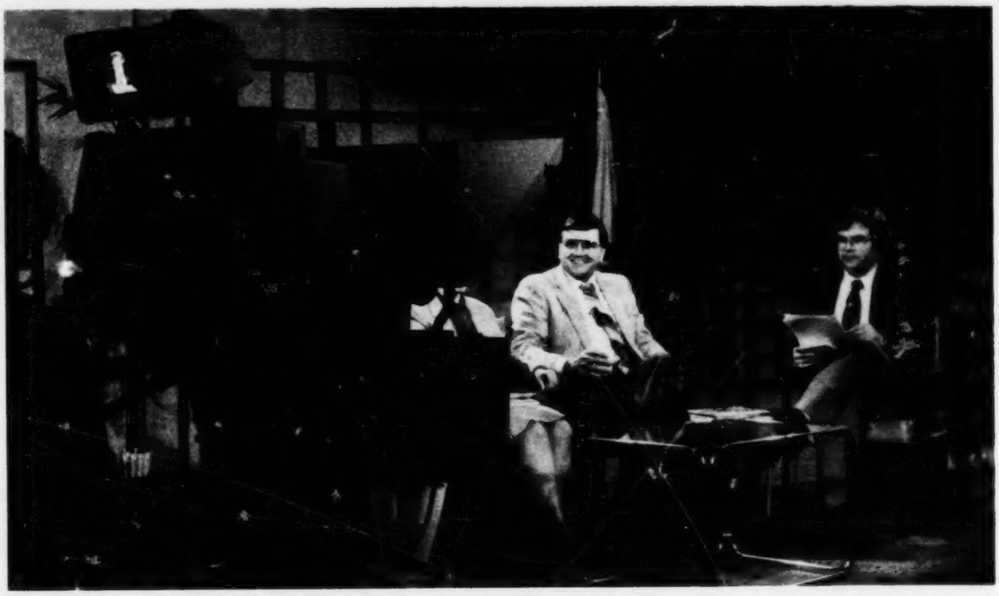
Valuable Resource

Many people have come to realize that the elderly are an excellent source of information about the past. Their individual lives can span most of a century, and there is much to be gained by recording the stories of their lives.

Both the Grandstory and Grandscrapbook can be treasures with lasting value. They will bring the younger person closer to a member of the older generation and enable them both to remember their times together. Future generations may come to know this older friend better because of a 4-H member's commitment to keeping a record of their visits. ▲

Switching To Low-Cost Options

Donald H. Goering
Assistant State Leader
4-H and Youth Programs
and
Melva L. Berkland
Communication
Specialist, 4-H
Iowa State University, Ames



Iowa 4-H is focusing on low-cost 4-H projects. Opposite Top: A satellite uplink facility at Iowa State University's TV station permitted a large audience to be reached quickly with the same message. Here, one of the control room monitor screens at WOI-TV displays the phone number to call to question panelists. Below: 4-H'ers, leaders, and parents watch the program "Options For 4-H Action." Above: At the first statwide 4-H meeting broadcast by WOI, Jerry Parsons (left), state 4-H and youth leader, serves as one of the panelists while Roger Brown, Extension communication specialist, moderates.

As the Iowa economy charted a downward trend, Extension responded with upbeat innovations.

4-H'ers, volunteers, and county, area, and state staff reached out to individuals feeling the pressure of lowered incomes. They used diverse delivery methods, from one-on-one to satellite, to focus attention on low-cost 4-H projects.

At the 1985 Iowa State Fair, a central display highlighted 33 4-H exhibits that used family resources wisely. County staff developed slide sets and presentations that showed examples of other low-cost exhibits.

State staff trained judges to recognize low-cost exhibits and stressed evaluating them on what young persons learned. Adult volunteer leaders received training to help teens in a new statewide program, "Discovering the Natural Me." An older teen on the State 4-H Council initiated a monthly radio feature where she interviewed other 4-H'ers about low-cost projects.

Message Via Satellite
Satellite became the new delivery method for state staff after they voted to reorder priorities and focus on low-cost 4-H options. An entire state of 4-H'ers, their parents, and leaders needed to be encouraged to consider cost when selecting projects for 1986; the cost of 4-H projects was not to be a barrier to 4-H participation.

Reaching a large audience with the same message quickly for low cost led to the use of a satellite uplink facility located at Iowa State University's commercial television station.

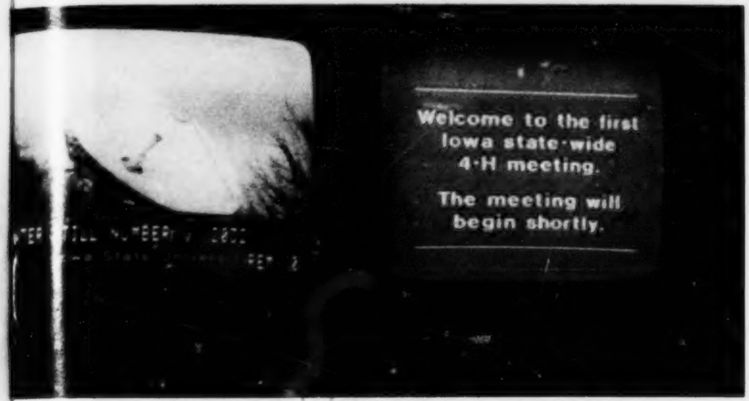
Countless steps led to the 41-minute program that opened with 11 minutes of pre-recorded video. The opening segment highlighted 14 project areas and included mostly existing footage from the large computer-catalogued Extension video library.

After the 11-minute introduction, the program went live for 30 minutes. Extension specialists and a volunteer formed a panel to respond to questions phoned in on the 800 inbound WATS line. Questions from 4-H'ers, parents, and leaders were typed on cards and passed to the panelists. Panelists then answered the questions on the air.

For an hour, after the live portion of the 4-H TV meeting, panelists and other members of the state Extension staff talked directly to callers. A total of 63 persons called during or after the program.

Publicity Efforts
The comprehensive publicity plan included a logo and newsletter article to use in county 4-H newsletters; a direct mailing to every volunteer 4-H club leader in Iowa with details about the program, a discussion guide to use to introduce the program and to help the 4-H'ers understand the reason for the special TV meeting, and an evaluation form; news releases for county staff to use to seek satellite receivers that 4-H groups could use; and news releases highlighting the historic 4-H TV meeting. In addition, radio and TV stations covered the event.

Downlink Arrangements
State staff gave suggestions to county staff and volunteer leaders on how to receive and view the program. Hundreds of different arrangements resulted.



A local community cable TV company downlinked the program and invited area 4-H'ers to come to the company's meeting room to view the program. Satellite dish dealers in several communities made receiver dishes available, as a demonstration or as a rental, to receive and view the program.

In addition, homeowners with receiver dishes invited area 4-H clubs into their homes to view the program. A large cable company received the show and transmitted it via land-based microwave to 46 communities for local access cable distribution.

Community colleges, private 4-year colleges, and a community hospital with receiver dishes opened their doors to 4-H groups to view and discuss the program.

After the 4-H program aired, counties could purchase a tape of the program to view at other 4-H meetings. However, many local 4-H groups and county Extension staff videorecorded the program as it aired.

Responses From Questionnaire

Volunteer leaders completed a mail questionnaire. Their responses led to three conclusions: (1) Satellite delivery can be used to distribute educational material. Nearly 85 percent of respondents reported receiving new or additional information on low-cost projects from the program. Nearly 71 percent reported that satellite transmission is an appropriate method to deliver *timely* information. (2) Interaction, through a "call-in format" should be included in future programs. (3) Currently too few satellite receiver dishes are available across Iowa to reach all 4-H clubs.

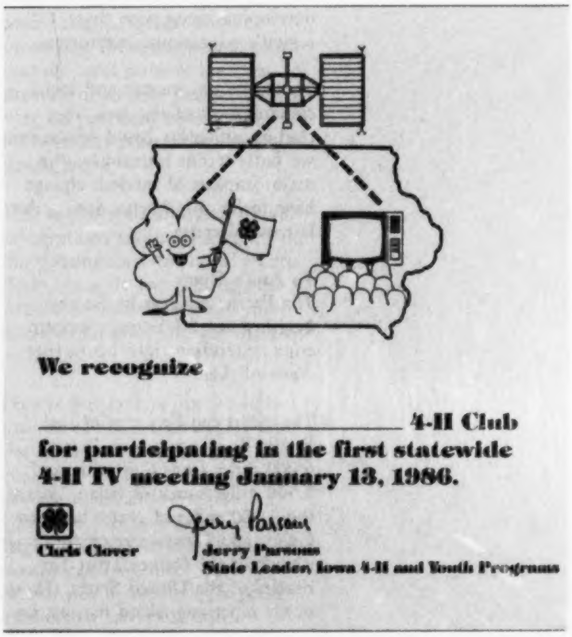
Extension recognized clubs who participated in the first statewide 4-H TV meeting. Clubs who returned the questionnaire received certificates incorporating a specially created logo.

Producers of the television program were Brian Menz and Karen Johnson, Extension communication specialists. Donald Goering, assistant state leader, 4-H and youth, and Melva Berkland, Extension communication specialist, 4-H, coordinated the arrangements.

Using Resources Wisely

4-H staff believe youth and their families will increasingly consider available family resources as decisions are made relating to projects, participation in 4-H learning experiences, and fair exhibits. More 4-H exhibits at 1986 fairs are expected to show that 4-H'ers considered low-cost options as they made decisions regarding projects and exhibits.

4-H'ers and their families most likely will be better equipped to confidently deal with reality because of the varied ways Extension directed attention to low-cost options for 4-H projects and activities.



We recognize

________________________ **4-H Club**

for participating in the first statewide 4-H TV meeting January 13, 1986.

Jerry Parsons

Chris Clover

Jerry Parsons
State Leader, Iowa 4-H and Youth Programs

Change Comes To The Pacific Basin

Randall L. Workman
Extension Sociology Specialist and Evaluation Coordinator
Community Development Institute
University of Guam
U.S. Territory

Top: Guam has mechanized farm operations in the island's southern agricultural lands but there are many subsistence income growers, like this elderly woman, who sells part of her produce to a local restaurant. Right: The American flag area of the Pacific Basin extends to Guam, 6000 miles from California.

The vast Pacific Basin is a place where the Extension Service is developing along with that region's educational institutions.

The current economic and social circumstances of the area, including university-based education, are fairly recent intrusions—the major impacts of modern change have really only begun during the last two decades.

To Asia's Doors

The Pacific Basin is by far the largest part of America's western edge, extending right up to the doors of Asia.

The American flag area of the Pacific Basin extends to Guam, 6,000 miles from California and 1,500 miles south of Japan. Across the 3,500 miles of ocean between Guam and Hawaii stretch the islands of the former Trust Territories of the United States. These newly emerging island nations are the newest additions to the U.S. land-grant college and Extension system.

Extension And Guam

The history of Extension on the island of Guam, a U.S. Territory since 1898, began in 1972 when the University of Guam was designated a land-grant institution.

The purpose of Extension here, as elsewhere, is to organize adult education programs which help citizens improve their economic, social, and cultural well-being in an ever-changing world.

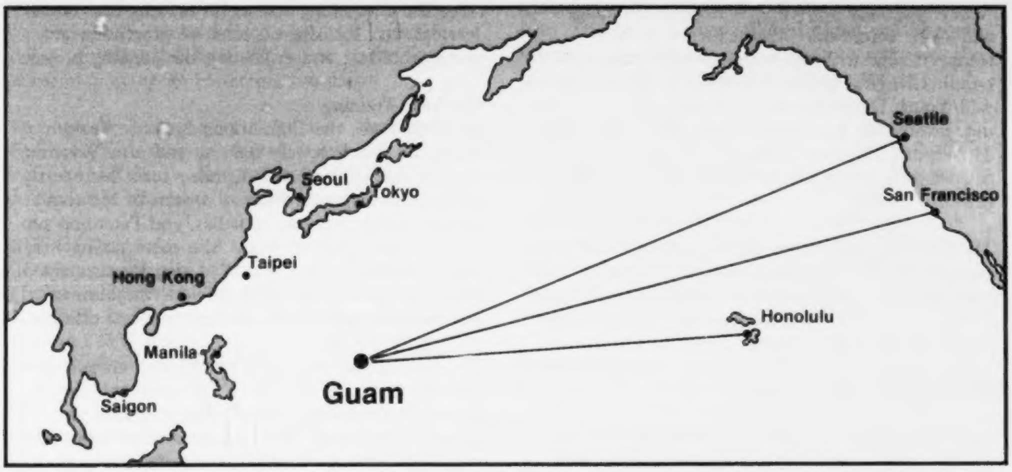
Differences

Lawrence Kasperbauer, director, College of Agriculture's Community Development Institute (CDI) at the University of Guam, points out that the island region is "characterized by biculturalism, bilingualism, rapid socio-economic change, and, most fundamentally composed of broad-based populations that remain non-western in their approaches to decisionmaking."

Guam has grown as Micronesia's major port of entry, military station, and largest administrative center. It was politically isolated from the other regional islands when it became a U.S. possession. Although Guam's small population (106,000) and isolation dictate rural qualities, the social life and public infrastructure have become quite cosmopolitan and mulitcultural.

Change And Social Costs

Guam's farming system has experienced changing social conditions that have intensified with modernization. Prior to 1939, agriculture was the principal livelihood for most islanders with



about 3,800 acres under cultivation. After World War II much of the island's agricultural land was acquired by the military.

Modernization, although desired by most, has brought on an economic dependency and a cost of living that many islanders cannot afford. Only about 500 acres are in commercial production. The island imports almost two-thirds of its fruit and vegetable needs, "much of which," says Terry Johnson of the U.S. Bureau of Reclamation, "could be produced on-island with irrigation development."

The lack of water during dry seasons, and an old water distribution system inherited from the Navy, restricts Guam's potential for multiple growing seasons throughout the year. This means the supply of produce concentrates at the end of the growing season, and fails to provide the regular flow of produce needed to meet the island's needs throughout the year

Consequently, a major goal of Guam's Extension programs is to increase local import substitution. This effort requires interrelated programming to affect both social and technical factors in Guam's farming system.

Nutrition Education

Chong Flores is a graduate of Guam's Expanded Food and Nutrition Education Program (EFNEP), which was started 3 years ago. The Flores household compound is a horticultural garden filled with fruit trees. "We have a moderate income," Chong explains, ". . .we grow much, but so much must be bought." The most important thing learned from her EFNEP teacher, she felt, was "budgeting the family's food money."

Olympia Camacho, coordinator of homemaker services for the local Catholic social services, voices concern over the loss of traditional skills and nonuse of local resources among the new generations. To work toward this goal, Guam EFNEP trained Camacho's homemaker aides so they could encourage use of local produce.

Guam's major cash crops are green beans, bittermelon, Chinese cabbage, head cabbage, cucumber, eggplant, bellpepper, sweet potato, tomato, and watermelon.

In a recent evaluation study, EFNEP's educational effort was found to directly impact on consumption of these local fruits and vegetables. Presently, crops are mainly watered by hand.

The use of more effective trickle irrigation is expanding among commercial growers and represents the key objective of Guam's irrigation development program.

Tradition And Extension

A cultural trait of the Pacific Basin region, with the exception of Hawaii's agribusiness, is that the indigenous commercial agriculture is small scale. Historically, the predominant type of agriculture is subsistence horticulture, fishing, and hunting.

Many of Extension's clientele prefer that programs aim at preserving these traditional producers. Local farmers want improvement as they define it, but they do not want to see their lifestyle and position on the land downgraded.

This requires an appraisal of some assumptions taken for granted in the contiguous 48 states. Pacific Basin clientele live between the American mainstream and international societies and are marginal to both.

Francis Mitchell, a district community development agent, states the consequence and the challenge for Extension professionals in the entire region: "Because Extension's values are largely dictated by the American mainstream, we must be very careful not to unwittingly preach intellectual salvation or commerical development economics."

Is Anyone Listening?

Brenda Seevers
Extension Program
Coordinator, 4-H Youth
University of Wyoming,
Laramie

A new statewide project—"Is Anyone Listening?"—is employing community resource teams to help teenagers cope with the pressures and strains of a rapidly changing society. The project, initiated by 4-H/Youth Development at the University of Wyoming, involves 48 participants from nine of Wyoming's 23 counties. They are working to shape local action plans that focus on matters chosen by Community Resource Teams.

The rapid shifts of Wyoming's economy, with its accompanying share of farm and ranch foreclosures, mine closings, and business bankruptcies, have had adverse effects on Wyoming families. Loss of family jobs or income affects young people in several ways. It may mean less money for clothes, school, and such non-school activities as dating.

Family financial problems often result in stress or divorce. And a declining job market shrinks most rapidly for teenagers.

Teenagers suffer from loss of self-esteem, increased stress, and guilt for their parents' problems. They are subjected to these pressures when they are already stressed by the shift to adulthood.

Problems Communicating

"One of the major problems we found was lack of communication," reports Jodi Coffey, a 4-H member in a 1985 Sweetwater County Program Review. "People," she points out, "both teens and adults sometimes have self-imposed inhibitions that prevent them from talking to others about their feelings or problems. This lack of communication often leads to isolation and, if left unattended, can surface later as lack of involvement, drug problems, or suicide."

The "Is Anyone Listening?" program places special emphasis on engaging young people in analyzing conditions that affect them in their communities, planning approaches to change those conditions in positive ways, and involving adults in implementing the plans youth develop and evaluating the results.

The strategies for implementation include: developing a model to identify community concerns; training Community Resource Teams; identifying community volunteers, especially youth, in a networking system; using the networking system for broader community development; focusing on effective prevention of youth problems; and evaluating the ongoing project.

Statewide Training

In March 1986, the Community Resource Teams began the first statewide training and nine Wyoming counties shaped local action plans. Team members reflected participation from all aspects of the community: youth, schools, churches, and Extension professional and volunteer staff. Also participating were USDA's Forest Service, the Wyoming Department of Public Assistance and Social Services, the Human Services Commission, and law enforcement officials.

The training was conducted by William Lofquist, director, Associates for Youth Development, Inc., a Tucson, Arizona firm; Tim DeBoodt, Extension agent, University of Wyoming; and three 4-H staff members—Brenda Seevers, Gene Rohrbeck, and William Smiley.

After the state training, Community Resource Teams expanded their teams locally as necessary and refined their plan of action. Action plan topics reflected the perceived needs in each county, and varied accordingly. The range of topics included: job skills for youth (Sheridan County); "latchkey" children (Park County); development of a county youth policy statement (Natrona County); self-esteem among youth (Campbell County); marketing 4-H (Hot Springs County); the high rate of juvenile delinquency, substance abuse, and teenage pregnancy (Lincoln County); attitudes toward alcohol abuse (Teton County); development of a coordinated Youth Opportunities Council (Washakie County); and teenage sexuality (Fremont County).

Commenting on the state training, Debra Starks, Human Services Commission, Casper, Wyoming, states: "The training session surpassed my expectations. At first I thought it would be in the 'social work' category. Then I discovered that the emphasis on community development was extremely important."

Project's Future

As the Community Resource Teams are expanding, youth are assuming a more active and participating role by serving as change agents in local decisionmaking and the policy development issues that affect them. The focus has turned toward the prevention of youth problems rather than reaction or remediation. And all of this has made Wyoming Extension more visible as a reliable resource and change agent.

Follow-up plans for this program include monthly accountability reports from each Community Resource Team, and additional training. Young people are joining hands in a positive, cooperative action.

One Wyoming teenager actively involved in the program offers this comment: "Youth are a very important part of the community and we have discovered we can help the outcome of youth problems!"

Extension Marketing—Education In Action

Carole S. Fromer
State Visual Media Coordinator
Cooperative Extension Service
The University of Connecticut, Storrs

EDUCATION IN ACTION · EDUCATION IN ACTION ·

Connecticut residents may now more readily link the Cooperative Extension Service with its diverse educational programs thanks to the success of the first phase of a statewide marketing campaign.

Through the leadership of Extension's Marketing Task Force and with support of professional and support staff, Connecticut is demonstrating that Extension marketing is education in action.

Role Of Task Force

Connecticut organized the task force following the Marketing Extension Workshop held in Chevy Chase, Maryland, in February 1985. Workshop attendees plus state and field faculty representing all Extension program areas comprise the group.

The task force members decided on an internal marketing emphasis for the initial marketing phase. They believed two key elements for a successful marketing strategy were needed: a uniform appearance to the public and overall staff support for the campaign.

Initial Efforts

The first marketing activity was a slogan contest to choose a theme for the campaign. "Education in Action" was selected from 83 entries submitted by staff members.

The staff member who submitted the winning idea received $100 in professional development funds and a certificate of recognition.

Contest judges were from the University of Connecticut Institutional Relations, and corporations and businesses dealing with advertising, writing, corporate marketing, and public relations.

The Extension graphic artist combined the slogan with a design, creating a marketing logo, which was quickly approved by state administrators.

The task force thought one way to present a common appearance to Extension clientele was by providing uniform enclosure notes in mailing envelopes. Previously numerous sizes, color combinations, and messages had been used. They selected a long slender format and concise wording for the enclosure. Individual names of staff will be printed on the enclosures at the University of Connecticut. Field office addresses are to be listed on the back for easy access by clientele.

In addition, the task force initiated a common format to use on business cards so Extension throughout the Nutmeg State will have a coordinated look.

Newspaper Started

Connecticut also began a newspaper, *X-10*, for Extension staff. The paper contains staff news, administrative updates, feature articles, humor, and staff publishing accomplishments. Classified and professional staff members in state and field offices and College of Agriculture and Natural Resources departments may contribute articles to the paper which will be issued six times per year.

Activities For Staff

Staff participation in the marketing effort was encouraged. One example initiated by the Task force was the "suggestion contest." A $25 prize in professional development funds went to each winner for suggestions in five separate competitions—Extension image enhancement, improving office efficiency, uplifting faculty and staff morale, cost-saving, and general suggestions for the organization.

Future Plans

In early 1986 the Marketing Task Force met to discuss additional activities to pursue as they begin focusing on external aspects of marketing.

Plans are to publish an Extension Annual Report, which will incorporate some suggestions offered by the judges of the slogan contest, and update the brochure that explains Connecticut's Extension program.

A video graphic is being developed using the marketing program's logo. The video can be used at the opening or closing of a television production or by itself as a public service announcement with a voice-over.

Another idea in the discussion stage is developing photo displays that feature Extension staff. Information on each person's academic degrees, years of experience, and areas of expertise would be included. These could be displayed in the appropriate state or field office.

The task force also suggests that portable displays with Extension's name and logo be available for staff use during programs. Since presentations are frequently made away from the Extension office, the displays would remind attendees of the information source.

Through their efforts and with support of Extension staff, the Marketing Task Force has provided a coordinated base for marketing Connecticut's Cooperative Extension Service.

United States
Department of Agriculture
Washington, DC 20250

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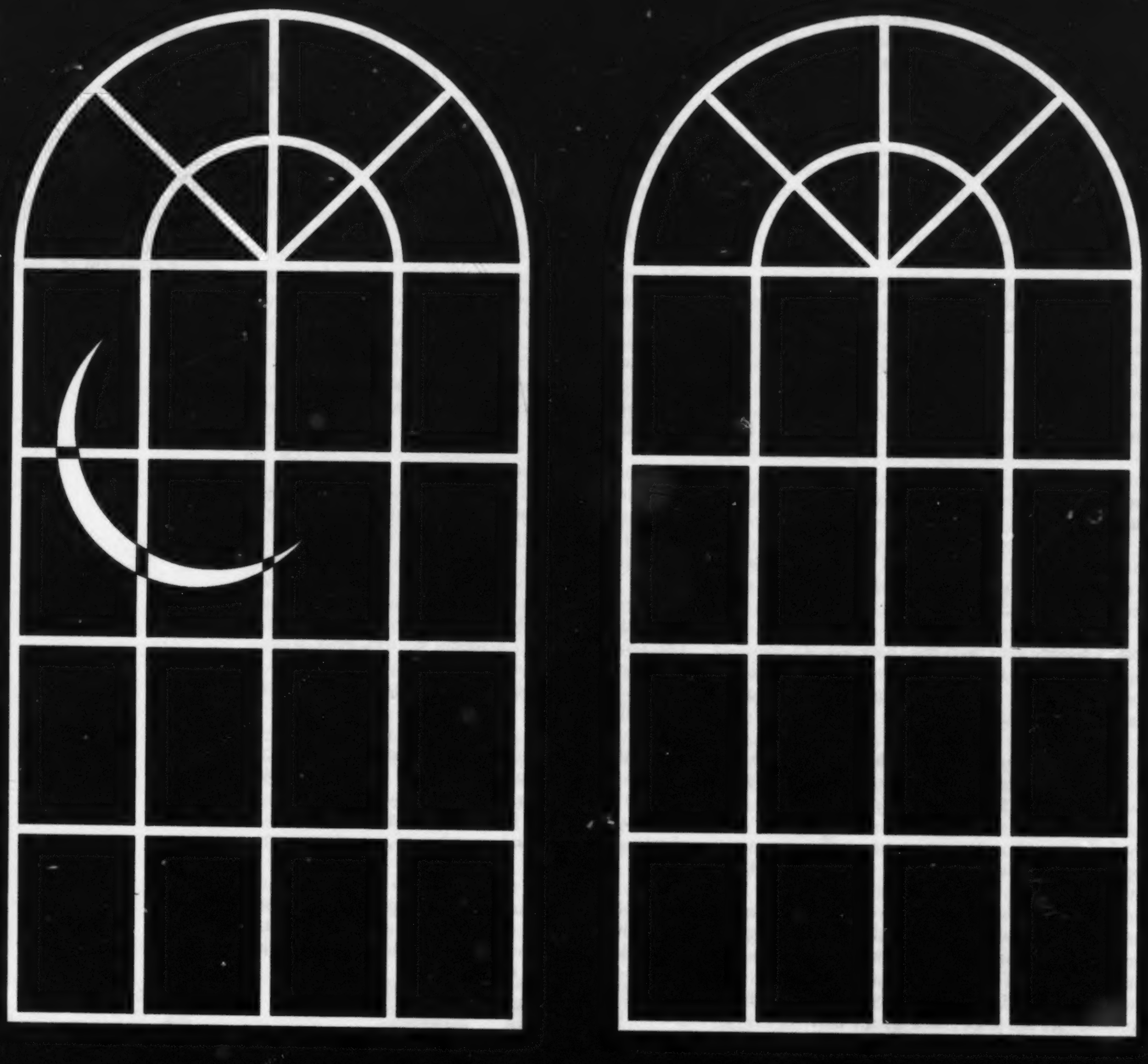
Penalty for private use, $300

FIRST CLASS MAIL
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